

Monday, September 12, 2016 8:53:19 AM

150960

Item ID: 646.4001

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016 **Start Qty:** 1.00

1

Cust Item ID:

Required Date: 9/12/2016 **Req'd Qty:** 1.00

*** 1 ***

Customer:

Reference:

Approvals:

Process Plan:

Date: SEP 12 2016

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

[illegible]

OCT 12 2016

OCT 04 2016

OCT 12 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

Work Order ID 150960

Monday, September 12, 2016 8:53:19 AM

150960

Page 2

Item ID: 646.4001

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 9/12/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Packaging	0.00							
130	Packaging	0.00				DAS 28 9-89	DAS 27 9-89		
Packaging	Memo Identify and pack for shipping as per PPP 646.4001 Location: <u> </u>								
								OCT 12 2016	
140	QC21- Final Inspection - Work Order Release	0.00							
140	QC	0.02				DAS 21 9-89			OCT 12 2016
Quality Control									

OCT 12 2016

DAS
21
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td style="border: none;"></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																																		
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																																			
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																																			
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																																			
Large Fab ☐	Composite ☐	Supplier ☐																																																																																				
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																																																																																		
Description Work Order Deviation			Disposition																																																																																			
			Completed By																																																																																			
			Lead hand / Supervisor Approval Verification																																																																																			
			QC / QA Coordinator Approval																																																																																			
<table style="width:100%; border: none;"> <tr> <td colspan="3" style="text-align: center; border-bottom: 1px solid black;">Root Cause</td> <td colspan="3" style="text-align: center; border-bottom: 1px solid black;">FAULT CATEGORY</td> </tr> <tr> <td style="width:15%; border: none;">Environment ☐</td> <td style="width:15%; border: none;">☐</td> <td style="width:15%; border: none;">No Re-verification ☐</td> <td style="width:15%; border: none;">Pressure/Forced ☐</td> <td style="width:15%; border: none;">Temperature/Cure ☐</td> <td style="width:15%; border: none;">Power Loss/Surge ☐</td> </tr> <tr> <td style="border: none;">Design ☐</td> <td style="border: none;">☐</td> <td style="border: none;">Operator ☐</td> <td style="border: none;">Bending ☐</td> <td style="border: none;">Set-up ☐</td> <td style="border: none;">Folio/Program ☐</td> </tr> <tr> <td style="border: none;">Doc/Data ☐</td> <td style="border: none;">☐</td> <td style="border: none;">Offset/Setup ☐</td> <td style="border: none;">Centre Not Concentric ☐</td> <td style="border: none;">BOM/Route ☐</td> <td style="border: none;">Grain ☐</td> </tr> <tr> <td style="border: none;">Equip/Tooling ☐</td> <td style="border: none;">☐</td> <td style="border: none;">Supplier ☐</td> <td style="border: none;">Cracks ☐</td> <td style="border: none;">Broken/Damage/Defect ☐</td> <td style="border: none;">Weld ☐</td> </tr> <tr> <td style="border: none;">Handling/Pre ☐</td> <td style="border: none;">☐</td> <td style="border: none;">Training ☐</td> <td style="border: none;">Crimp/Kink/Ripple/Wave ☐</td> <td style="border: none;">Inspection Incomplete/Unqualified ☐</td> <td style="border: none;">Wrong Stock Pulled ☐</td> </tr> <tr> <td style="border: none;">Material ☐</td> <td style="border: none;">☐</td> <td style="border: none;">Use for Testing ☐</td> <td style="border: none;">Cuffs ☐</td> <td style="border: none;">Contamination ☐</td> <td style="border: none;">Out of Sequence ☐</td> </tr> <tr> <td style="border: none;">Internal Transport ☐</td> <td style="border: none;">☐</td> <td style="border: none;">Poor Information ☐</td> <td style="border: none;">Crushing ☐</td> <td style="border: none;">Countersink ☐</td> <td style="border: none;">Off-set ☐</td> </tr> <tr> <td style="border: none;">Tribal Knowledge ☐</td> <td style="border: none;">☐</td> <td style="border: none;">Rushing ☐</td> <td style="border: none;">Heat Treat ☐</td> <td style="border: none;">Cut Too Short ☐</td> <td style="border: none;">Mislabeled ☐</td> </tr> <tr> <td style="border: none;">LOA ☐</td> <td style="border: none;">☐</td> <td style="border: none;">Product Improvement ☐</td> <td style="border: none;">Wave/Twist in Tube ☐</td> <td style="border: none;">Instructions Incomplete/Unclear ☐</td> <td style="border: none;">Fit/Function ☐</td> </tr> <tr> <td style="border: none;">Substation ☐</td> <td style="border: none;">☐</td> <td style="border: none;">Process Improvement ☐</td> <td style="border: none;">Marks/Chatter ☐</td> <td style="border: none;">Drill Holes ☐</td> <td style="border: none;">Misaligned/off center ☐</td> </tr> <tr> <td style="border: none;">Past Expiry Date ☐</td> <td style="border: none;">☐</td> <td style="border: none;">Manufacturing Process ☐</td> <td colspan="3" rowspan="2" style="border: none;"></td> </tr> <tr> <td style="border: none;">Misidentified ☐</td> <td style="border: none;">☐</td> <td style="border: none;">Past Due ☐</td> </tr> <tr> <td colspan="3" style="border: none;"></td> <td colspan="3" style="border: none;">OTHER : ☐</td> </tr> </table>						Root Cause			FAULT CATEGORY			Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Past Expiry Date ☐	☐	Manufacturing Process ☐				Misidentified ☐	☐	Past Due ☐				OTHER : ☐		
Root Cause			FAULT CATEGORY																																																																																			
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐																																																																																	
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐																																																																																	
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐																																																																																	
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐																																																																																	
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐																																																																																	
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐																																																																																	
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐																																																																																	
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐																																																																																	
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐																																																																																	
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐																																																																																	
Past Expiry Date ☐	☐	Manufacturing Process ☐																																																																																				
Misidentified ☐	☐	Past Due ☐																																																																																				
			OTHER : ☐																																																																																			

Picklist Print

Monday, September 12, 2016 8:53:15 AM

Page 1

Work Order ID: 150960

150960

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016

Required Date: 9/12/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 12.10.23 NEW ISSUE DD VERF:JLM
IPP REV:B 15.01.08 AS PER DWG REV.B DD VERF:JLM IPP
REV:C 16.01.07 AS PER DWG REV.C DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
600.0129 *600 0129* VHB TAPE 75935A651 DAS 27 9-89		Purchased	No			100	f	64.0000	8	8			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>				OCT 11 2016	DAS 28 9-89
				CCK095		64							
				m127920		64							
600.0990 *600 0990* Magnabond 6398 Part A Size 112 ml 12/01/17 DAS 27 9-89		Purchased	No			100	Each	30.0000	1	1			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>				OCT 11 2016	DAS 28 9-89
				CA2		23							
				M135213		11							
				M135600		12							
				PKG		7							
				M134167		1							
				M134249		6							
600.0991 *600 0991* Magnabond 6398 Part B Size 112 ml 12/01/17 DAS 27 9-89		Purchased	No			100	Each	29.0000	1	1			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>				OCT 11 2016	DAS 28 9-89
				CA2		23							
				M135213		11							
				m135600		12							
				PKG		6							
				m134167		1							
				m134249		5							

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____		MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition			
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
		OTHER : ☐					

Picklist Print

Monday, September 12, 2016 8:53:15 AM

Work Order ID: 150960

150960

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016

Required Date: 9/12/2016

Start Qty: 1.00

Required Qty: 1.00

600.1012 Purchased No

100 Each 23.0000 1 1

600 1012

Sealant PR1425B2 (#654 sem)

**

OCT 17 2016

DAS 28 9-89

Location

Loc Qty

Loc Code

cck017

23

m135407

5

m135530

8

m135600

10

DAS 27 9-89

5/10/2017

600.1013 Purchased No

100 Each 720.0000 5 5

600 1013

021200-3M TAPE PRIMER 94 PRIMER 24216

**

OCT 17 2016

D/S 6 9-89 DAS 28 9-89

Location

Loc Qty

Loc Code

CCK095

720

m131145

720

6/15/2016

DAS 27 9-89

646.2910 Manufactured No

100 Each 1.0000 1 1

646 2910

Deflector

**

149303 OCT 17 2016

DAS 6 9-89 DAS 28 9-89

Location

Loc Qty

Loc Code

CCK050

1

140993

1

DAS 27 9-89

646.3001 Manufactured No

100 Each 2.0000 1 1

646 3001

Lower Cutter Assembly

**

1-18591 OCT 12 2016

DAS 6 9-89 DAS 28 9-89

Location

Loc Qty

Loc Code

cck018

2

148335

2

DAS 27 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____		MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition			
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
		OTHER : ☐ _____					

Picklist Print

Monday, September 12, 2016 8:53:15 AM

Page 3

Work Order ID: 150960

150960

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016

Required Date: 9/12/2016

Start Qty: 1.00

Required Qty: 1.00

646.3110
646 3110
Channel

Manufactured No

100 Each 13.0000 1 1

**

OCT 04 2016

DAS 6 28 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

cck020

13

141015

13

646.3210
646 3210
Support

Manufactured No

100 Each 8.0000 1 1

**

OCT 04 2016

DAS 6 28 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

cck020

8

141064

1

142469

7

646.3301
646 3301
Upper Cutter Assy

Manufactured No

100 Each 2.0000 1 1

**

OCT 12 2016

DAS 6 28 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

cck018

2

148268

2

646.3510
646 3510
Strut

Manufactured No

100 Each 15.0000 1 1

**

OCT 04 2016

DAS 6 28 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

cck104

4

140979

4

CCK108A

11

140979

11

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date	☐	Manufacturing Process	☐				
Misidentified	☐	Past Due	☐				
				OTHER :			

Picklist Print

Monday, September 12, 2016 8:53:15 AM

Page 4

Work Order ID: 150960

150960

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016

Required Date: 9/12/2016

Start Qty: 1.00

Required Qty: 1.00

646.3511 Manufactured No

100 Each 14.0000 1 1

646 3511

Strut

OCT 04 2016

DAS 28
6 9-89

DAS 27
9-89

Location

Loc Qty

Loc Code

cck104

5

141499

5

CCK108A

9

141499

9

646.3610 Manufactured No

100 Each 4.0000 1 1

646 3610

Filler

OCT 04 2016

DAS 28
6 9-89

DAS 27
9-89

Location

Loc Qty

Loc Code

cck104

4

141103

4

646.3710 Manufactured No

100 Each 14.0000 1 1

646 3710

Doubler

OCT 04 2016

DAS 28
6 9-89

DAS 27
9-89

Location

Loc Qty

Loc Code

CCK002

14

140753

14

646.3711 Manufactured No

100 Each 7.0000 1 1

646 3711

Clip

OCT 04 2016

DAS 28
6 9-89

DAS 27
9-89

Location

Loc Qty

Loc Code

cck104

7

142632

7

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____		MRB (QSI042) Approval 	
Description Work Order Deviation				Disposition			
				Completed By			
				Lead hand / Supervisor Approval Verification			
				QC / QA Coordinator Approval			

Root Cause				FAULT CATEGORY			
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____			
Misidentified	☐	Past Due	☐				

Picklist Print

Monday, September 12, 2016 8:53:16 AM

Page 5

Work Order ID: 150960

150960

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016

Required Date: 9/12/2016

Start Qty: 1.00

Required Qty: 1.00

646.3712	Manufactured	No		100	Each	9.0000	1	1
----------	--------------	----	--	-----	------	--------	---	---

646 3712

Clip

DAS
27
9-89

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

cck104	9	
140787	9	

**

OCT 04 2016

DAS
27
9-89

646.3713	Manufactured	No		100	Each	13.0000	1	1
----------	--------------	----	--	-----	------	---------	---	---

646 3713

Gusset

DAS
27
9-89

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

cck105	13	
140084	13	

**

OCT 04 2016

DAS
27
9-89

646.3714	Manufactured	No		100	Each	0.0000	1	1
----------	--------------	----	--	-----	------	--------	---	---

646 3714

Gusset

DAS
27
9-89

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

cck105	20	
142630	5	
148568	15	

**

148235

OCT 04 2016

DAS
27
9-89

646.3715	Manufactured	No		100	Each	20.0000	2	2
----------	--------------	----	--	-----	------	---------	---	---

646 3715

Strut Double

DAS
27
9-89

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

cck105	25	
140845	25	

**

DAS
27
9-89

646.3716	Manufactured	No		100	Each	25.0000	1	1
----------	--------------	----	--	-----	------	---------	---	---

646 3716

Gauge Bracket

DAS
27
9-89

OCT 04 2016

DAS
27
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td style="border: none;"></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																			
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																				
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																				
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																				
Large Fab ☐	Composite ☐	Supplier ☐																																																																					
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																																																																			
Description Work Order Deviation			Disposition																																																																				
			Completed By																																																																				
			Lead hand / Supervisor Approval Verification																																																																				
			QC / QA Coordinator Approval																																																																				
Root Cause <table style="width:100%; border: none;"> <tr> <td style="border: none;">Environment ☐</td> <td style="border: none;">No Re-verification ☐</td> <td style="border: none;">Pressure/Forced ☐</td> </tr> <tr> <td style="border: none;">Design ☐</td> <td style="border: none;">Operator ☐</td> <td style="border: none;">Bending ☐</td> </tr> <tr> <td style="border: none;">Doc/Data ☐</td> <td style="border: none;">Offset/Setup ☐</td> <td style="border: none;">Centre Not Concentric ☐</td> </tr> <tr> <td style="border: none;">Equip/Tooling ☐</td> <td style="border: none;">Supplier ☐</td> <td style="border: none;">Cracks ☐</td> </tr> <tr> <td style="border: none;">Handling/Pre ☐</td> <td style="border: none;">Training ☐</td> <td style="border: none;">Crimp/Kink/Ripple/Wave ☐</td> </tr> <tr> <td style="border: none;">Material ☐</td> <td style="border: none;">Use for Testing ☐</td> <td style="border: none;">Cuffs ☐</td> </tr> <tr> <td style="border: none;">Internal Transport ☐</td> <td style="border: none;">Poor Information ☐</td> <td style="border: none;">Crushing ☐</td> </tr> <tr> <td style="border: none;">Tribal Knowledge ☐</td> <td style="border: none;">Rushing ☐</td> <td style="border: none;">Heat Treat ☐</td> </tr> <tr> <td style="border: none;">LOA ☐</td> <td style="border: none;">Product Improvement ☐</td> <td style="border: none;">Wave/Twist in Tube ☐</td> </tr> <tr> <td style="border: none;">Substation ☐</td> <td style="border: none;">Process Improvement ☐</td> <td style="border: none;">Marks/Chatter ☐</td> </tr> <tr> <td style="border: none;">Past Expiry Date ☐</td> <td style="border: none;">Manufacturing Process ☐</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;">Misidentified ☐</td> <td style="border: none;">Past Due ☐</td> <td style="border: none;">OTHER : ☐</td> </tr> </table>			Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Design ☐	Operator ☐	Bending ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Past Expiry Date ☐	Manufacturing Process ☐		Misidentified ☐	Past Due ☐	OTHER : ☐	FAULT CATEGORY <table style="width:100%; border: none;"> <tr> <td style="border: none;">Temperature/Cure ☐</td> <td style="border: none;">Power Loss/Surge ☐</td> <td style="border: none;">Positioned Wrong ☐</td> </tr> <tr> <td style="border: none;">Set-up ☐</td> <td style="border: none;">Folio/Program ☐</td> <td style="border: none;">Outside Dimensions ☐</td> </tr> <tr> <td style="border: none;">BOM/Route ☐</td> <td style="border: none;">Grain ☐</td> <td style="border: none;">Over/Under tolerance ☐</td> </tr> <tr> <td style="border: none;">Broken/Damage/Defect ☐</td> <td style="border: none;">Weld ☐</td> <td style="border: none;">Part Incorrect ☐</td> </tr> <tr> <td style="border: none;">Inspection Incomplete/Unqualified ☐</td> <td style="border: none;">Wrong Stock Pulled ☐</td> <td style="border: none;">Part Lost/Missing ☐</td> </tr> <tr> <td style="border: none;">Contamination ☐</td> <td style="border: none;">Out of Sequence ☐</td> <td style="border: none;">Part Moved ☐</td> </tr> <tr> <td style="border: none;">Countersink ☐</td> <td style="border: none;">Off-set ☐</td> <td style="border: none;">Drawing ☐</td> </tr> <tr> <td style="border: none;">Cut Too Short ☐</td> <td style="border: none;">Mislabeled ☐</td> <td style="border: none;">Finish ☐</td> </tr> <tr> <td style="border: none;">Instructions Incomplete/Unclear ☐</td> <td style="border: none;">Fit/Function ☐</td> <td style="border: none;">Misread ☐</td> </tr> <tr> <td style="border: none;">Drill Holes ☐</td> <td style="border: none;">Misaligned/off center ☐</td> <td style="border: none;">Turning Sequence ☐</td> </tr> </table>			Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Countersink ☐	Off-set ☐	Drawing ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Environment ☐	No Re-verification ☐	Pressure/Forced ☐																																																																					
Design ☐	Operator ☐	Bending ☐																																																																					
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐																																																																					
Equip/Tooling ☐	Supplier ☐	Cracks ☐																																																																					
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐																																																																					
Material ☐	Use for Testing ☐	Cuffs ☐																																																																					
Internal Transport ☐	Poor Information ☐	Crushing ☐																																																																					
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐																																																																					
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐																																																																					
Substation ☐	Process Improvement ☐	Marks/Chatter ☐																																																																					
Past Expiry Date ☐	Manufacturing Process ☐																																																																						
Misidentified ☐	Past Due ☐	OTHER : ☐																																																																					
Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																																					
Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																																																																					
BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																																					
Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																					
Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																					
Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																					
Countersink ☐	Off-set ☐	Drawing ☐																																																																					
Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																					
Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																					
Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																					

Picklist Print

Monday, September 12, 2016 8:53:16 AM

Page 6

Work Order ID: 150960

150960
646 4001

Parent Item: 646.4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016

Required Date: 9/12/2016

Start Qty: 1.00

Required Qty: 1.00

646.3717
646 3717
Doubler

Manufactured No

100 Each 12.0000 1 1

**

OCT 04 2016

DAS 6 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

cck105

12

142634

12

646.3718
646 3718
Custom Washer

Manufactured No

100 Each 3.0000 2 2

**

150389

OCT 04 2016

DAS 6 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

cck105

3

104

140788

3

646.3719
646 3719
Doubler

Manufactured No

100 Each 10.0000 2 2

**

OCT 04 2016

DAS 6 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

cck105

10

104

148282

4

149300

6

646.3810
646 3810
Bracket

Manufactured No

100 Each 8.0000 2 2

**

OCT 04 2016

DAS 6 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

CCK106

8

141555

3

148559

5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																		
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																		
Large Fab ☐	Composite ☐	Supplier ☐																			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																	
Description Work Order Deviation		Disposition		Completed By																	
				Lead hand / Supervisor Approval Verification																	
				QC / QA Coordinator Approval																	
<table style="width:100%; border: none;"> <tr> <td style="width:25%; vertical-align: top;"> Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ </td> <td style="width:25%; vertical-align: top;"> ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due </td> <td style="width:25%; vertical-align: top;"> ☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter </td> <td style="width:25%; vertical-align: top;"> FAULT CATEGORY ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes </td> <td style="width:25%; vertical-align: top;"> ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center </td> <td style="width:25%; vertical-align: top;"> ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence </td> </tr> <tr> <td colspan="4" style="height: 40px;"></td> </tr> <tr> <td colspan="4" style="text-align: center;">OTHER : _____</td> </tr> </table>					Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due	☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter	FAULT CATEGORY ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes	☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center	☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence					OTHER : _____						
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due	☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter	FAULT CATEGORY ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes	☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center	☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence																
OTHER : _____																					

Picklist Print

Monday, September 12, 2016 8:53:16 AM

Page 7

Work Order ID: 150960

150960

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016

Required Date: 9/12/2016

Start Qty: 1.00

Required Qty: 1.00

646.3811 Manufactured No

100 Each 11.0000 1 1

646 3811

Radius Block

OCT 04 2016

DAS 28
6 9-89

DAS 27
9-89

Location	Loc Qty	Loc Code
CCK106	11	
140895	1	
148258	10	

646.3812 Manufactured No

100 Each 11.0000 2 2

646 3812

Gusset Bracket

OCT 04 2016

DAS 28
6 9-89

DAS 27
9-89

Location	Loc Qty	Loc Code
CCK106	11	
148240	11	

646.3813 Manufactured No

100 Each 6.0000 1 1

646 3813

Strut Bracket

OCT 04 2016

DAS 28
6 9-89

DAS 27
9-89

Location	Loc Qty	Loc Code
CCK106	6	
141019	1	
148269	5	

646.3910 Manufactured No

100 Each 22.0000 4 4

646 3910

Shim

OCT 04 2016

DAS 28
6 9-89

DAS 27
9-89

Location	Loc Qty	Loc Code
CCK106	22	
140772	7	
148261	15	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____		MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition			
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
		OTHER : ☐ _____					

Picklist Print

Monday, September 12, 2016 8:53:17 AM

Work Order ID: 150960

150960

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016

Required Date: 9/12/2016

Start Qty: 1.00

Required Qty: 1.00

646.3911 Manufactured No

100 Each 33.0000 1 1

646 3911

Shim

OCT 04 2016

DAS 28 6 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

cck104

16

126229

16

CCK106

17

126059

17

646.3912 Manufactured No

100 Each 29.0000 4 4

646 3912

Shim

OCT 04 2016

DAS 28 6 9-89

Location

Loc Qty

Loc Code

CCK106

29

140238

14

149310

15

646.3913 Manufactured No

100 Each 73.0000 1 1

646 3913

Shim

OCT 04 2016

DAS 28 6 9-89

Location

Loc Qty

Loc Code

CCK106

73

126060

73

646.9410 Manufactured No

100 Each 82.0000 1 1

646 9410

Shim

OCT 04 2016

DAS 28 6 9-89

Location

Loc Qty

Loc Code

cck011

82

140671

82

DAS 27 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																		
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																		
Large Fab ☐	Composite ☐	Supplier ☐																			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																	
Description Work Order Deviation		Disposition		Completed By																	
				Lead hand / Supervisor Approval Verification																	
				QC / QA Coordinator Approval																	
<table style="width:100%; border: none;"> <tr> <td style="width:25%; vertical-align: top;"> Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ </td> <td style="width:25%; vertical-align: top;"> No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐ </td> <td style="width:25%; vertical-align: top;"> Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ </td> <td style="width:25%; vertical-align: top;"> FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ </td> <td style="width:25%; vertical-align: top;"> Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ </td> <td style="width:25%; vertical-align: top;"> Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐ </td> </tr> <tr> <td colspan="4" style="vertical-align: top;"> OTHER : ☐ </td> </tr> </table>					Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐										
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																
OTHER : ☐																					

Picklist Print

Monday, September 12, 2016 8:53:17 AM

Page 9

Work Order ID: 150960

150960

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016

Required Date: 9/12/2016

Start Qty: 1.00

Required Qty: 1.00

647.0112
647 0112
Strut Bracket

Manufactured No

100 Each 6.0000 2 2

**

DAS 28 9-89
DAS 6 9-89
OCT 11 2016
157352

Location

Loc Qty

Loc Code

CCK107

6

142661

6

647.7703
647 7703
Strut Assembly

Manufactured No

100 Each 10.0000 2 2

**

OCT 04 2016
DAS 28 9-89
DAS 6 9-89

Location

Loc Qty

Loc Code

CCK114

10

145013

10

650.9201
650 9201
Eyelet Bracket Assembly

Manufactured No

100 Each 8.0000 2 2

**

OCT 04 2016
DAS 28 9-89
DAS 6 9-89

Location

Loc Qty

Loc Code

cck126

6

148562

6

cck127

2

141582

2

AN3-11A
AN3-11A
Bolt

Purchased No

100 Each 125.0000 10 10

**

OCT 04 2016
DAS 28 9-89
DAS 6 9-89

Location

Loc Qty

Loc Code

over003

100

m135390

100

ST349

25

m134852

25

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition																					
								Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : ☐																		

Picklist Print

Monday, September 12, 2016 8:53:17 AM

Work Order ID: 150960

150960

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016

Required Date: 9/12/2016

Start Qty: 1.00

Required Qty: 1.00

AN3-12A Purchased No

100 Each 251.0000 2 2

AN3-12A

Bolt

135603 OCT 04 2016

DAS 28
6 9-89

DAS 27
9-89

Location	Loc Qty	Loc Code
over003	225	
m135603	225	
ST349	26	
m133064	16	
m134257	10	

AN3-13A Purchased No

100 Each 50.0000 1 1

AN3-13A

Bolt

OCT 04 2016

DAS 28
6 9-89

DAS 27
9-89

Location	Loc Qty	Loc Code
GA	20	
m127070	20	
ST349	30	
m134365	30	

AN316C4R Purchased No

100 Each 17.0000 2 2

AN316C4R

Nut, Jam

OCT 04 2016

DAS 28
6 9-89

DAS 27
9-89

Location	Loc Qty	Loc Code
ST331	17	
m133234	15	
m133523	2	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition																					
								Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐																			

Picklist Print

Page 11

Monday, September 12, 2016 8:53:17 AM

Work Order ID: 150960

150960

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016

Required Date: 9/12/2016

Start Qty: 1.00

Required Qty: 1.00

AN3-3A

Purchased

No

100

Each

184.0000

4

4

AN3-3A

Bolt

**

Location

Loc Qty

Loc Code

ST350

184

m135408

9

m135466

100

m135566

75

OCT 04 2016

DAS 6 28 9-89

AN3-4A

Purchased

No

100

Each

152.0000

10

10

AN3-4A

Bolt

**

Location

Loc Qty

Loc Code

ST350

152

m134955

152

OCT 04 2016

DAS 6 28 9-89

AN3-5A

Purchased

No

100

Each

337.0000

2

2

AN3-5A

Bolt

**

Location

Loc Qty

Loc Code

FP001

157

m133686

2

m134502

155

ST350

180

m135058

180

OCT 04 2016

DAS 6 28 9-89

AN3-6A

Purchased

No

100

Each

169.0000

2

2

AN3-6A

Bolt

**

Location

Loc Qty

Loc Code

ST349

169

M134955

169

OCT 04 2016

DAS 6 28 9-89

Monday, September 12, 2016 8:53:17 AM

Shop Packet Print

Page 11

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td style="border: none;"></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																																									
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																																										
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																																										
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																																										
Large Fab ☐	Composite ☐	Supplier ☐																																																																																											
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																																																																																									
Description Work Order Deviation			Disposition																																																																																										
			Completed By																																																																																										
			Lead hand / Supervisor Approval Verification																																																																																										
			QC / QA Coordinator Approval																																																																																										
<table style="width:100%; border: none;"> <tr> <td colspan="3" style="text-align: center; vertical-align: top;"> Root Cause <table style="width:100%; border: none;"> <tr><td style="border: none;">Environment ☐</td><td style="border: none;">☐</td><td style="border: none;">No Re-verification ☐</td></tr> <tr><td style="border: none;">Design ☐</td><td style="border: none;">☐</td><td style="border: none;">Operator ☐</td></tr> <tr><td style="border: none;">Doc/Data ☐</td><td style="border: none;">☐</td><td style="border: none;">Offset/Setup ☐</td></tr> <tr><td style="border: none;">Equip/Tooling ☐</td><td style="border: none;">☐</td><td style="border: none;">Supplier ☐</td></tr> <tr><td style="border: none;">Handling/Pre ☐</td><td style="border: none;">☐</td><td style="border: none;">Training ☐</td></tr> <tr><td style="border: none;">Material ☐</td><td style="border: none;">☐</td><td style="border: none;">Use for Testing ☐</td></tr> <tr><td style="border: none;">Internal Transport ☐</td><td style="border: none;">☐</td><td style="border: none;">Poor Information ☐</td></tr> <tr><td style="border: none;">Tribal Knowledge ☐</td><td style="border: none;">☐</td><td style="border: none;">Rushing ☐</td></tr> <tr><td style="border: none;">LOA ☐</td><td style="border: none;">☐</td><td style="border: none;">Product Improvement ☐</td></tr> <tr><td style="border: none;">Substation ☐</td><td style="border: none;">☐</td><td style="border: none;">Process Improvement ☐</td></tr> <tr><td style="border: none;">Past Expiry Date ☐</td><td style="border: none;">☐</td><td style="border: none;">Manufacturing Process ☐</td></tr> <tr><td style="border: none;">Misidentified ☐</td><td style="border: none;">☐</td><td style="border: none;">Past Due ☐</td></tr> </table> </td> <td colspan="3" style="text-align: center; vertical-align: top;"> FAULT CATEGORY <table style="width:100%; border: none;"> <tr><td style="border: none;">☐ Pressure/Forced</td><td style="border: none;">☐ Temperature/Cure</td><td style="border: none;">☐ Power Loss/Surge</td><td style="border: none;">☐ Positioned Wrong</td></tr> <tr><td style="border: none;">☐ Bending</td><td style="border: none;">☐ Set-up</td><td style="border: none;">☐ Folio/Program</td><td style="border: none;">☐ Outside Dimensions</td></tr> <tr><td style="border: none;">☐ Centre Not Concentric</td><td style="border: none;">☐ BOM/Route</td><td style="border: none;">☐ Grain</td><td style="border: none;">☐ Over/Under tolerance</td></tr> <tr><td style="border: none;">☐ Cracks</td><td style="border: none;">☐ Broken/Damage/Defect</td><td style="border: none;">☐ Weld</td><td style="border: none;">☐ Part Incorrect</td></tr> <tr><td style="border: none;">☐ Crimp/Kink/Ripple/Wave</td><td style="border: none;">☐ Inspection Incomplete/Unqualified</td><td style="border: none;">☐ Wrong Stock Pulled</td><td style="border: none;">☐ Part Lost/Missing</td></tr> <tr><td style="border: none;">☐ Cuffs</td><td style="border: none;">☐ Contamination</td><td style="border: none;">☐ Out of Sequence</td><td style="border: none;">☐ Part Moved</td></tr> <tr><td style="border: none;">☐ Crushing</td><td style="border: none;">☐ Countersink</td><td style="border: none;">☐ Off-set</td><td style="border: none;">☐ Drawing</td></tr> <tr><td style="border: none;">☐ Heat Treat</td><td style="border: none;">☐ Cut Too Short</td><td style="border: none;">☐ Mislabeled</td><td style="border: none;">☐ Finish</td></tr> <tr><td style="border: none;">☐ Wave/Twist in Tube</td><td style="border: none;">☐ Instructions Incomplete/Unclear</td><td style="border: none;">☐ Fit/Function</td><td style="border: none;">☐ Misread</td></tr> <tr><td style="border: none;">☐ Marks/Chatter</td><td style="border: none;">☐ Drill Holes</td><td style="border: none;">☐ Misaligned/off center</td><td style="border: none;">☐ Turning Sequence</td></tr> </table> </td> </tr> <tr> <td colspan="6" style="text-align: center; vertical-align: top;"> OTHER : ☐ </td> </tr> </table>						Root Cause <table style="width:100%; border: none;"> <tr><td style="border: none;">Environment ☐</td><td style="border: none;">☐</td><td style="border: none;">No Re-verification ☐</td></tr> <tr><td style="border: none;">Design ☐</td><td style="border: none;">☐</td><td style="border: none;">Operator ☐</td></tr> <tr><td style="border: none;">Doc/Data ☐</td><td style="border: none;">☐</td><td style="border: none;">Offset/Setup ☐</td></tr> <tr><td style="border: none;">Equip/Tooling ☐</td><td style="border: none;">☐</td><td style="border: none;">Supplier ☐</td></tr> <tr><td style="border: none;">Handling/Pre ☐</td><td style="border: none;">☐</td><td style="border: none;">Training ☐</td></tr> <tr><td style="border: none;">Material ☐</td><td style="border: none;">☐</td><td style="border: none;">Use for Testing ☐</td></tr> <tr><td style="border: none;">Internal Transport ☐</td><td style="border: none;">☐</td><td style="border: none;">Poor Information ☐</td></tr> <tr><td style="border: none;">Tribal Knowledge ☐</td><td style="border: none;">☐</td><td style="border: none;">Rushing ☐</td></tr> <tr><td style="border: none;">LOA ☐</td><td style="border: none;">☐</td><td style="border: none;">Product Improvement ☐</td></tr> <tr><td style="border: none;">Substation ☐</td><td style="border: none;">☐</td><td style="border: none;">Process Improvement ☐</td></tr> <tr><td style="border: none;">Past Expiry Date ☐</td><td style="border: none;">☐</td><td style="border: none;">Manufacturing Process ☐</td></tr> <tr><td style="border: none;">Misidentified ☐</td><td style="border: none;">☐</td><td style="border: none;">Past Due ☐</td></tr> </table>			Environment ☐	☐	No Re-verification ☐	Design ☐	☐	Operator ☐	Doc/Data ☐	☐	Offset/Setup ☐	Equip/Tooling ☐	☐	Supplier ☐	Handling/Pre ☐	☐	Training ☐	Material ☐	☐	Use for Testing ☐	Internal Transport ☐	☐	Poor Information ☐	Tribal Knowledge ☐	☐	Rushing ☐	LOA ☐	☐	Product Improvement ☐	Substation ☐	☐	Process Improvement ☐	Past Expiry Date ☐	☐	Manufacturing Process ☐	Misidentified ☐	☐	Past Due ☐	FAULT CATEGORY <table style="width:100%; border: none;"> <tr><td style="border: none;">☐ Pressure/Forced</td><td style="border: none;">☐ Temperature/Cure</td><td style="border: none;">☐ Power Loss/Surge</td><td style="border: none;">☐ Positioned Wrong</td></tr> <tr><td style="border: none;">☐ Bending</td><td style="border: none;">☐ Set-up</td><td style="border: none;">☐ Folio/Program</td><td style="border: none;">☐ Outside Dimensions</td></tr> <tr><td style="border: none;">☐ Centre Not Concentric</td><td style="border: none;">☐ BOM/Route</td><td style="border: none;">☐ Grain</td><td style="border: none;">☐ Over/Under tolerance</td></tr> <tr><td style="border: none;">☐ Cracks</td><td style="border: none;">☐ Broken/Damage/Defect</td><td style="border: none;">☐ Weld</td><td style="border: none;">☐ Part Incorrect</td></tr> <tr><td style="border: none;">☐ Crimp/Kink/Ripple/Wave</td><td style="border: none;">☐ Inspection Incomplete/Unqualified</td><td style="border: none;">☐ Wrong Stock Pulled</td><td style="border: none;">☐ Part Lost/Missing</td></tr> <tr><td style="border: none;">☐ Cuffs</td><td style="border: none;">☐ Contamination</td><td style="border: none;">☐ Out of Sequence</td><td style="border: none;">☐ Part Moved</td></tr> <tr><td style="border: none;">☐ Crushing</td><td style="border: none;">☐ Countersink</td><td style="border: none;">☐ Off-set</td><td style="border: none;">☐ Drawing</td></tr> <tr><td style="border: none;">☐ Heat Treat</td><td style="border: none;">☐ Cut Too Short</td><td style="border: none;">☐ Mislabeled</td><td style="border: none;">☐ Finish</td></tr> <tr><td style="border: none;">☐ Wave/Twist in Tube</td><td style="border: none;">☐ Instructions Incomplete/Unclear</td><td style="border: none;">☐ Fit/Function</td><td style="border: none;">☐ Misread</td></tr> <tr><td style="border: none;">☐ Marks/Chatter</td><td style="border: none;">☐ Drill Holes</td><td style="border: none;">☐ Misaligned/off center</td><td style="border: none;">☐ Turning Sequence</td></tr> </table>			☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence	OTHER : ☐					
Root Cause <table style="width:100%; border: none;"> <tr><td style="border: none;">Environment ☐</td><td style="border: none;">☐</td><td style="border: none;">No Re-verification ☐</td></tr> <tr><td style="border: none;">Design ☐</td><td style="border: none;">☐</td><td style="border: none;">Operator ☐</td></tr> <tr><td style="border: none;">Doc/Data ☐</td><td style="border: none;">☐</td><td style="border: none;">Offset/Setup ☐</td></tr> <tr><td style="border: none;">Equip/Tooling ☐</td><td style="border: none;">☐</td><td style="border: none;">Supplier ☐</td></tr> <tr><td style="border: none;">Handling/Pre ☐</td><td style="border: none;">☐</td><td style="border: none;">Training ☐</td></tr> <tr><td style="border: none;">Material ☐</td><td style="border: none;">☐</td><td style="border: none;">Use for Testing ☐</td></tr> <tr><td style="border: none;">Internal Transport ☐</td><td style="border: none;">☐</td><td style="border: none;">Poor Information ☐</td></tr> <tr><td style="border: none;">Tribal Knowledge ☐</td><td style="border: none;">☐</td><td style="border: none;">Rushing ☐</td></tr> <tr><td style="border: none;">LOA ☐</td><td style="border: none;">☐</td><td style="border: none;">Product Improvement ☐</td></tr> <tr><td style="border: none;">Substation ☐</td><td style="border: none;">☐</td><td style="border: none;">Process Improvement ☐</td></tr> <tr><td style="border: none;">Past Expiry Date ☐</td><td style="border: none;">☐</td><td style="border: none;">Manufacturing Process ☐</td></tr> <tr><td style="border: none;">Misidentified ☐</td><td style="border: none;">☐</td><td style="border: none;">Past Due ☐</td></tr> </table>			Environment ☐	☐	No Re-verification ☐	Design ☐	☐	Operator ☐	Doc/Data ☐	☐	Offset/Setup ☐	Equip/Tooling ☐	☐	Supplier ☐	Handling/Pre ☐	☐	Training ☐	Material ☐	☐	Use for Testing ☐	Internal Transport ☐	☐	Poor Information ☐	Tribal Knowledge ☐	☐	Rushing ☐	LOA ☐	☐	Product Improvement ☐	Substation ☐	☐	Process Improvement ☐	Past Expiry Date ☐	☐	Manufacturing Process ☐	Misidentified ☐	☐	Past Due ☐	FAULT CATEGORY <table style="width:100%; border: none;"> <tr><td style="border: none;">☐ Pressure/Forced</td><td style="border: none;">☐ Temperature/Cure</td><td style="border: none;">☐ Power Loss/Surge</td><td style="border: none;">☐ Positioned Wrong</td></tr> <tr><td style="border: none;">☐ Bending</td><td style="border: none;">☐ Set-up</td><td style="border: none;">☐ Folio/Program</td><td style="border: none;">☐ Outside Dimensions</td></tr> <tr><td style="border: none;">☐ Centre Not Concentric</td><td style="border: none;">☐ BOM/Route</td><td style="border: none;">☐ Grain</td><td style="border: none;">☐ Over/Under tolerance</td></tr> <tr><td style="border: none;">☐ Cracks</td><td style="border: none;">☐ Broken/Damage/Defect</td><td style="border: none;">☐ Weld</td><td style="border: none;">☐ Part Incorrect</td></tr> <tr><td style="border: none;">☐ Crimp/Kink/Ripple/Wave</td><td style="border: none;">☐ Inspection Incomplete/Unqualified</td><td style="border: none;">☐ Wrong Stock Pulled</td><td style="border: none;">☐ Part Lost/Missing</td></tr> <tr><td style="border: none;">☐ Cuffs</td><td style="border: none;">☐ Contamination</td><td style="border: none;">☐ Out of Sequence</td><td style="border: none;">☐ Part Moved</td></tr> <tr><td style="border: none;">☐ Crushing</td><td style="border: none;">☐ Countersink</td><td style="border: none;">☐ Off-set</td><td style="border: none;">☐ Drawing</td></tr> <tr><td style="border: none;">☐ Heat Treat</td><td style="border: none;">☐ Cut Too Short</td><td style="border: none;">☐ Mislabeled</td><td style="border: none;">☐ Finish</td></tr> <tr><td style="border: none;">☐ Wave/Twist in Tube</td><td style="border: none;">☐ Instructions Incomplete/Unclear</td><td style="border: none;">☐ Fit/Function</td><td style="border: none;">☐ Misread</td></tr> <tr><td style="border: none;">☐ Marks/Chatter</td><td style="border: none;">☐ Drill Holes</td><td style="border: none;">☐ Misaligned/off center</td><td style="border: none;">☐ Turning Sequence</td></tr> </table>			☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence												
Environment ☐	☐	No Re-verification ☐																																																																																											
Design ☐	☐	Operator ☐																																																																																											
Doc/Data ☐	☐	Offset/Setup ☐																																																																																											
Equip/Tooling ☐	☐	Supplier ☐																																																																																											
Handling/Pre ☐	☐	Training ☐																																																																																											
Material ☐	☐	Use for Testing ☐																																																																																											
Internal Transport ☐	☐	Poor Information ☐																																																																																											
Tribal Knowledge ☐	☐	Rushing ☐																																																																																											
LOA ☐	☐	Product Improvement ☐																																																																																											
Substation ☐	☐	Process Improvement ☐																																																																																											
Past Expiry Date ☐	☐	Manufacturing Process ☐																																																																																											
Misidentified ☐	☐	Past Due ☐																																																																																											
☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong																																																																																										
☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions																																																																																										
☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance																																																																																										
☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect																																																																																										
☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing																																																																																										
☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved																																																																																										
☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing																																																																																										
☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish																																																																																										
☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread																																																																																										
☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence																																																																																										
OTHER : ☐																																																																																													

Picklist Print

Page 12

Monday, September 12, 2016 8:53:17 AM

Work Order ID: 150960

150960

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016

Required Date: 9/12/2016

Start Qty: 1.00

Required Qty: 1.00

AN44-5A	Purchased	No	100	Each	17.0000	2	2
---------	-----------	----	-----	------	---------	---	---

AN44-5A

Eyebolt

OCT 04 2016

DAS 28
6 9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST339

17

m135127

17

2

AN4C7A

Purchased

No

100

Each

48.0000

2

2

AN4C7A

BOLT

OCT 04 2016

DAS 28
6 9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST345

48

m135470

48

2

AN665-34R

Purchased

No

100

Each

27.0000

2

2

AN665-34R

Clevis

OCT 04 2016

DAS 28
6 9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST330

27

M135544

7

M135603

20

1
1

CCR264SS3-02

Purchased

No

100

Each

411.0000

36

36

CCR264SS3-02

Cherry Rivet

135603

OCT 04 2016

DAS 28
6 9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST321

411

M134134

2

M135127

109

M135603

300

Monday, September 12, 2016 8:53:17 AM

Shop Packet Print

Page 12

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition																					
								Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequer ☐	OTHER : _____																			

Picklist Print

Monday, September 12, 2016 8:53:17 AM

Work Order ID: 150960

150960
646 4001

Parent Item: 646.4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016

Required Date: 9/12/2016

Start Qty: 1.00

Required Qty: 1.00

CR3213-5-3 Purchased No

100 Each 118.0000 14 14

CR3213-5-3

Cherry Rivet

**

134754

OCT 04 2016

DAS 6 28 9-89

DAS 28 9-89

Location

Loc Qty

Loc Code

CCK003

100

m135408

100

ST319

18

m134142

18

MS20426AD5-7 Purchased No

100 Each 905.0000 2 2

MS20426AD5-7

RIVET

**

OCT 04 2016

DAS 6 28 9-89

DAS 28 9-89

Location

Loc Qty

Loc Code

ST311

905

M133922

905

MS20470AD5-5.5 Purchased No

100 Each 870.0000 8 8

MS20470AD5-5 5

Rivet

**

OCT 04 2016

DAS 6 28 9-89

DAS 28 9-89

Location

Loc Qty

Loc Code

ST309

870

m134063

870

MS20470AD5-6 Purchased No

100 Each 760.0000 8 8

MS20470AD5-6

RIVET

**

OCT 04 2016

DAS 6 28 9-89

DAS 28 9-89

Location

Loc Qty

Loc Code

ST309

760

124089

760

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																	
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																	
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																	
Large Fab ☐	Composite ☐	Supplier ☐																																																																		
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																																																																
Description Work Order Deviation		Disposition		Completed By																																																																
				Lead hand / Supervisor Approval Verification																																																																
				QC / QA Coordinator Approval																																																																
Root Cause <table style="width:100%; border: none;"> <tr> <td style="border: none;">Environment ☐</td> <td style="border: none;">No Re-verification ☐</td> </tr> <tr> <td style="border: none;">Design ☐</td> <td style="border: none;">Operator ☐</td> </tr> <tr> <td style="border: none;">Doc/Data ☐</td> <td style="border: none;">Offset/Setup ☐</td> </tr> <tr> <td style="border: none;">Equip/Tooling ☐</td> <td style="border: none;">Supplier ☐</td> </tr> <tr> <td style="border: none;">Handling/Pre ☐</td> <td style="border: none;">Training ☐</td> </tr> <tr> <td style="border: none;">Material ☐</td> <td style="border: none;">Use for Testing ☐</td> </tr> <tr> <td style="border: none;">Internal Transport ☐</td> <td style="border: none;">Poor Information ☐</td> </tr> <tr> <td style="border: none;">Tribal Knowledge ☐</td> <td style="border: none;">Rushing ☐</td> </tr> <tr> <td style="border: none;">LOA ☐</td> <td style="border: none;">Product Improvement ☐</td> </tr> <tr> <td style="border: none;">Substation ☐</td> <td style="border: none;">Process Improvement ☐</td> </tr> <tr> <td style="border: none;">Past Expiry Date ☐</td> <td style="border: none;">Manufacturing Process ☐</td> </tr> <tr> <td style="border: none;">Misidentified ☐</td> <td style="border: none;">Past Due ☐</td> </tr> </table>		Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	FAULT CATEGORY <table style="width:100%; border: none;"> <tr> <td style="border: none;">Pressure/Forced ☐</td> <td style="border: none;">Temperature/Cure ☐</td> <td style="border: none;">Power Loss/Surge ☐</td> <td style="border: none;">Positioned Wrong ☐</td> </tr> <tr> <td style="border: none;">Bending ☐</td> <td style="border: none;">Set-up ☐</td> <td style="border: none;">Folio/Program ☐</td> <td style="border: none;">Outside Dimensions ☐</td> </tr> <tr> <td style="border: none;">Centre Not Concentric ☐</td> <td style="border: none;">BOM/Route ☐</td> <td style="border: none;">Grain ☐</td> <td style="border: none;">Over/Under tolerance ☐</td> </tr> <tr> <td style="border: none;">Cracks ☐</td> <td style="border: none;">Broken/Damage/Defect ☐</td> <td style="border: none;">Weld ☐</td> <td style="border: none;">Part Incorrect ☐</td> </tr> <tr> <td style="border: none;">Crimp/Kink/Ripple/Wave ☐</td> <td style="border: none;">Inspection Incomplete/Unqualified ☐</td> <td style="border: none;">Wrong Stock Pulled ☐</td> <td style="border: none;">Part Lost/Missing ☐</td> </tr> <tr> <td style="border: none;">Cuffs ☐</td> <td style="border: none;">Contamination ☐</td> <td style="border: none;">Out of Sequence ☐</td> <td style="border: none;">Part Moved ☐</td> </tr> <tr> <td style="border: none;">Crushing ☐</td> <td style="border: none;">Countersink ☐</td> <td style="border: none;">Off-set ☐</td> <td style="border: none;">Drawing ☐</td> </tr> <tr> <td style="border: none;">Heat Treat ☐</td> <td style="border: none;">Cut Too Short ☐</td> <td style="border: none;">Mislabeled ☐</td> <td style="border: none;">Finish ☐</td> </tr> <tr> <td style="border: none;">Wave/Twist in Tube ☐</td> <td style="border: none;">Instructions Incomplete/Unclear ☐</td> <td style="border: none;">Fit/Function ☐</td> <td style="border: none;">Misread ☐</td> </tr> <tr> <td style="border: none;">Marks/Chatter ☐</td> <td style="border: none;">Drill Holes ☐</td> <td style="border: none;">Misaligned/off center ☐</td> <td style="border: none;">Turning Sequence ☐</td> </tr> </table>			Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Environment ☐	No Re-verification ☐																																																																			
Design ☐	Operator ☐																																																																			
Doc/Data ☐	Offset/Setup ☐																																																																			
Equip/Tooling ☐	Supplier ☐																																																																			
Handling/Pre ☐	Training ☐																																																																			
Material ☐	Use for Testing ☐																																																																			
Internal Transport ☐	Poor Information ☐																																																																			
Tribal Knowledge ☐	Rushing ☐																																																																			
LOA ☐	Product Improvement ☐																																																																			
Substation ☐	Process Improvement ☐																																																																			
Past Expiry Date ☐	Manufacturing Process ☐																																																																			
Misidentified ☐	Past Due ☐																																																																			
Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																																	
Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																																																																	
Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																																	
Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																	
Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																	
Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																	
Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																																																																	
Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																	
Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																	
Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																	
OTHER : _____																																																																				

Picklist Print

Page 14

Monday, September 12, 2016 8:53:17 AM

Work Order ID: 150960

150960

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016

Required Date: 9/12/2016

Start Qty: 1.00

Required Qty: 1.00

MS20470AD5-7

Purchased

No

100

Each

431.0000

3

3

MS20470AD5-7

Rivet

DAS
27
9-89

Location

Loc Qty

Loc Code

ST309

431

431

123425

**

OCT 04 2016

DAS
6
9-89

DAS
28
9-89

MS21042-08

MS21042L08

Purchased

No

100

Each

33.0000

2

2

MS21042-08

USE MS21042L08

DAS
27
9-89

Location

Loc Qty

Loc Code

ST304

25

122815

25

ST306

8

m130388

8

**

OCT 04 2016

DAS
6
9-89

DAS
28
9-89

MS21042-3

MS21042L3

Purchased

No

100

Each

0.0000

2

2

MS21042-3

Nut

DAS
27
9-89

Location

Loc Qty

Loc Code

FP001

14

m133790

14

GA

273

m134360

112

m135135

161

OVER007

600

m135530

600

ST303

1191

m135407

591

m135600

600

**

OCT 04 2016

DAS
6
9-89

DAS
28
9-89

MS21042L3

Purchased

No

100

Each

2,078.000

61

61

MS21042L3

Nut

DAS
28
9-89

Monday, September 12, 2016 8:53:18 AM

Shop Packet Print

Page 14

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition																					
								Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : ☐																		

Picklist Print

Page 15

Monday, September 12, 2016 8:53:18 AM

Work Order ID: 150960

150960

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016

Required Date: 9/12/2016

Start Qty: 1.00

Required Qty: 1.00

MS21042L4

Purchased

No

100

Each

1,966.000

2

2

MS21042L4

Nut

OCT 04 2016

DAS
6
9-89

DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

FP001

51

m133363

51

GA

412

m133769

104

m135058

308

OVER007

500

m135603

500

ST3003

13

m134955

13

ST303

990

m135470

990

MS21047-3

Purchased

No

100

Each

177.0000

18

18

MS21047-3

Nut Plate

OCT 04 2016

DAS
6
9-89

DAS
2
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST301

177

m135297

77

m135603

100

MS24693-C278

Purchased

No

100

Each

65.0000

5

5

MS24693-C278

Screw

OCT 04 2016

DAS
6
9-89

DAS
2
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST86

65

m135135

65

Monday, September 12, 2016 8:53:18 AM

Shop Packet Print

Page 15

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td style="border: none;"></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																																	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																																		
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																																		
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																																		
Large Fab ☐	Composite ☐	Supplier ☐																																																																																			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																																																																																	
Description Work Order Deviation			Disposition																																																																																		
			Completed By																																																																																		
			Lead hand / Supervisor Approval Verification																																																																																		
			QC / QA Coordinator Approval																																																																																		
<table style="width:100%; border: none;"> <tr> <td colspan="3" style="text-align: center;">Root Cause</td> <td colspan="3" style="text-align: center;">FAULT CATEGORY</td> </tr> <tr> <td style="border: none;">Environment ☐</td> <td style="border: none;">☐ No Re-verification</td> <td style="border: none;">☐ Pressure/Forced</td> <td style="border: none;">☐ Temperature/Cure</td> <td style="border: none;">☐ Power Loss/Surge</td> <td style="border: none;">☐ Positioned Wrong</td> </tr> <tr> <td style="border: none;">Design ☐</td> <td style="border: none;">☐ Operator</td> <td style="border: none;">☐ Bending</td> <td style="border: none;">☐ Set-up</td> <td style="border: none;">☐ Folio/Program</td> <td style="border: none;">☐ Outside Dimensions</td> </tr> <tr> <td style="border: none;">Doc/Data ☐</td> <td style="border: none;">☐ Offset/Setup</td> <td style="border: none;">☐ Centre Not Concentric</td> <td style="border: none;">☐ BOM/Route</td> <td style="border: none;">☐ Grain</td> <td style="border: none;">☐ Over/Under tolerance</td> </tr> <tr> <td style="border: none;">Equip/Tooling ☐</td> <td style="border: none;">☐ Supplier</td> <td style="border: none;">☐ Cracks</td> <td style="border: none;">☐ Broken/Damage/Defect</td> <td style="border: none;">☐ Weld</td> <td style="border: none;">☐ Part Incorrect</td> </tr> <tr> <td style="border: none;">Handling/Pre ☐</td> <td style="border: none;">☐ Training</td> <td style="border: none;">☐ Crimp/Kink/Ripple/Wave</td> <td style="border: none;">☐ Inspection Incomplete/Unqualified</td> <td style="border: none;">☐ Wrong Stock Pulled</td> <td style="border: none;">☐ Part Lost/Missing</td> </tr> <tr> <td style="border: none;">Material ☐</td> <td style="border: none;">☐ Use for Testing</td> <td style="border: none;">☐ Cuffs</td> <td style="border: none;">☐ Contamination</td> <td style="border: none;">☐ Out of Sequence</td> <td style="border: none;">☐ Part Moved</td> </tr> <tr> <td style="border: none;">Internal Transport ☐</td> <td style="border: none;">☐ Poor Information</td> <td style="border: none;">☐ Crushing</td> <td style="border: none;">☐ Countersink</td> <td style="border: none;">☐ Off-set</td> <td style="border: none;">☐ Drawing</td> </tr> <tr> <td style="border: none;">Tribal Knowledge ☐</td> <td style="border: none;">☐ Rushing</td> <td style="border: none;">☐ Heat Treat</td> <td style="border: none;">☐ Cut Too Short</td> <td style="border: none;">☐ Mislabeled</td> <td style="border: none;">☐ Finish</td> </tr> <tr> <td style="border: none;">LOA ☐</td> <td style="border: none;">☐ Product Improvement</td> <td style="border: none;">☐ Wave/Twist in Tube</td> <td style="border: none;">☐ Instructions Incomplete/Unclear</td> <td style="border: none;">☐ Fit/Function</td> <td style="border: none;">☐ Misread</td> </tr> <tr> <td style="border: none;">Substation ☐</td> <td style="border: none;">☐ Process Improvement</td> <td style="border: none;">☐ Marks/Chatter</td> <td style="border: none;">☐ Drill Holes</td> <td style="border: none;">☐ Misaligned/off center</td> <td style="border: none;">☐ Turning Sequence</td> </tr> <tr> <td style="border: none;">Past Expiry Date ☐</td> <td style="border: none;">☐ Manufacturing Process</td> <td colspan="4" rowspan="2" style="border: none;"></td> </tr> <tr> <td style="border: none;">Misidentified ☐</td> <td style="border: none;">☐ Past Due</td> </tr> <tr> <td colspan="2" style="border: none;"></td> <td colspan="4" style="border: none;">OTHER : _____</td> </tr> </table>						Root Cause			FAULT CATEGORY			Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong	Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions	Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance	Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect	Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing	Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved	Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing	Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish	LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread	Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence	Past Expiry Date ☐	☐ Manufacturing Process					Misidentified ☐	☐ Past Due			OTHER : _____			
Root Cause			FAULT CATEGORY																																																																																		
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong																																																																																
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions																																																																																
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance																																																																																
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect																																																																																
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing																																																																																
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved																																																																																
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing																																																																																
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish																																																																																
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread																																																																																
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence																																																																																
Past Expiry Date ☐	☐ Manufacturing Process																																																																																				
Misidentified ☐	☐ Past Due																																																																																				
		OTHER : _____																																																																																			

Picklist Print

Monday, September 12, 2016 8:53:18 AM

Page 16

Work Order ID: 150960

150960

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016

Required Date: 9/12/2016

Start Qty: 1.00

Required Qty: 1.00

MS24694-S51

Purchased

No

100

Each

249.0000

5

5

MS24694-S51

Screw

DAS
27
9-89

Location

Loc Qty

Loc Code

ST284

249

m135442

249

**

OCT 04 2016

DAS
6
9-89
28
9-89

MS24694-S54

Purchased

No

100

Each

72.0000

2

2

MS24694-S54

SCREW

DAS
27
9-89

Location

Loc Qty

Loc Code

ST284

72

m134851

50

m135274

22

**

OCT 04 2016

DAS
6
9-89
28
9-89

MS24694-S55

Purchased

No

100

Each

156.0000

3

3

MS24694-S55

Screw

DAS
27
9-89

Location

Loc Qty

Loc Code

ST283

156

m134376

56

m135408

100

**

OCT 04 2016

DAS
6
9-89
28
9-89

MS27039-08-13

Purchased

No

100

Each

118.0000

2

2

MS27039-08-13

Screw

DAS
27
9-89

Location

Loc Qty

Loc Code

ST278

118

124326

118

**

OCT 04 2016

DAS
6
9-89
28
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
☐ Environment	☐ Design	☐ Doc/Data	☐ Equip/Tooling	☐ Handling/Pre	☐ Material	☐ Internal Transport	☐ Tribal Knowledge
☐ LOA	☐ Substation	☐ Past Expiry Date	☐ Misidentified	☐ No Re-verification	☐ Operator	☐ Offset/Setup	☐ Supplier
				☐ Training	☐ Use for Testing	☐ Poor Information	☐ Rushing
				☐ Product Improvement	☐ Process Improvement	☐ Manufacturing Process	☐ Past Due
				☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ OTHER : _____			
				☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes			
				☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center			
				☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence			

Picklist Print

Monday, September 12, 2016 8:53:18 AM

Page 17

Work Order ID: 150960

150960

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016

Required Date: 9/12/2016

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-10

Purchased

No

100

Each

312.0000

2

2

MS27039-1-10

SCREW

**

OCT 04 2016

DAS 6 28
9-89 9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

12

m129541

12

ST280

300

m135603

300

2

MS27039-1-12

Purchased

No

100

Each

119.0000

6

6

MS27039-1-12

Screw

**

OCT 04 2016

DAS 6 28
9-89 9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST280

119

m134294

19

m135566

100

6

MS27039-1-16

Purchased

No

100

Each

188.0000

24

24

MS27039-1-16

Screw

**

OCT 04 2016

DAS 6 28
9-89 9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST280

188

m134502

88

m135566

100

16

8

MS27039-1-19

Purchased

No

100

Each

135.0000

22

22

MS27039-1-19

Screw

**

135721

OCT 04 2016

DAS 6 28
9-89 9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

82

m134134

82

ST280

53

m135058

3

m135603

50

Monday, September 12, 2016 8:53:18 AM

Shop Packet Print

Page 17

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																	
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																	
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																	
Large Fab ☐	Composite ☐	Supplier ☐																																																																		
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																																																																
Description Work Order Deviation		Disposition		Completed By																																																																
				Lead hand / Supervisor Approval Verification																																																																
				QC / QA Coordinator Approval																																																																
Root Cause		FAULT CATEGORY																																																																		
<table style="width:100%; border: none;"> <tr><td style="border: none;">Environment ☐</td><td style="border: none;">No Re-verification ☐</td></tr> <tr><td style="border: none;">Design ☐</td><td style="border: none;">Operator ☐</td></tr> <tr><td style="border: none;">Doc/Data ☐</td><td style="border: none;">Offset/Setup ☐</td></tr> <tr><td style="border: none;">Equip/Tooling ☐</td><td style="border: none;">Supplier ☐</td></tr> <tr><td style="border: none;">Handling/Pre ☐</td><td style="border: none;">Training ☐</td></tr> <tr><td style="border: none;">Material ☐</td><td style="border: none;">Use for Testing ☐</td></tr> <tr><td style="border: none;">Internal Transport ☐</td><td style="border: none;">Poor Information ☐</td></tr> <tr><td style="border: none;">Tribal Knowledge ☐</td><td style="border: none;">Rushing ☐</td></tr> <tr><td style="border: none;">LOA ☐</td><td style="border: none;">Product Improvement ☐</td></tr> <tr><td style="border: none;">Substation ☐</td><td style="border: none;">Process Improvement ☐</td></tr> <tr><td style="border: none;">Past Expiry Date ☐</td><td style="border: none;">Manufacturing Process ☐</td></tr> <tr><td style="border: none;">Misidentified ☐</td><td style="border: none;">Past Due ☐</td></tr> </table>	Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	<table style="width:100%; border: none;"> <tr><td style="border: none;">Pressure/Forced ☐</td></tr> <tr><td style="border: none;">Bending ☐</td></tr> <tr><td style="border: none;">Centre Not Concentric ☐</td></tr> <tr><td style="border: none;">Cracks ☐</td></tr> <tr><td style="border: none;">Crimp/Kink/Ripple/Wave ☐</td></tr> <tr><td style="border: none;">Cuffs ☐</td></tr> <tr><td style="border: none;">Crushing ☐</td></tr> <tr><td style="border: none;">Heat Treat ☐</td></tr> <tr><td style="border: none;">Wave/Twist in Tube ☐</td></tr> <tr><td style="border: none;">Marks/Chatter ☐</td></tr> </table>	Pressure/Forced ☐	Bending ☐	Centre Not Concentric ☐	Cracks ☐	Crimp/Kink/Ripple/Wave ☐	Cuffs ☐	Crushing ☐	Heat Treat ☐	Wave/Twist in Tube ☐	Marks/Chatter ☐	<table style="width:100%; border: none;"> <tr><td style="border: none;">Temperature/Cure ☐</td><td style="border: none;">Power Loss/Surge ☐</td><td style="border: none;">Positioned Wrong ☐</td></tr> <tr><td style="border: none;">Set-up ☐</td><td style="border: none;">Folio/Program ☐</td><td style="border: none;">Outside Dimensions ☐</td></tr> <tr><td style="border: none;">BOM/Route ☐</td><td style="border: none;">Grain ☐</td><td style="border: none;">Over/Under tolerance ☐</td></tr> <tr><td style="border: none;">Broken/Damage/Defect ☐</td><td style="border: none;">Weld ☐</td><td style="border: none;">Part Incorrect ☐</td></tr> <tr><td style="border: none;">Inspection Incomplete/Unqualified ☐</td><td style="border: none;">Wrong Stock Pulled ☐</td><td style="border: none;">Part Lost/Missing ☐</td></tr> <tr><td style="border: none;">Contamination ☐</td><td style="border: none;">Out of Sequence ☐</td><td style="border: none;">Part Moved ☐</td></tr> <tr><td style="border: none;">Countersink ☐</td><td style="border: none;">Off-set ☐</td><td style="border: none;">Drawing ☐</td></tr> <tr><td style="border: none;">Cut Too Short ☐</td><td style="border: none;">Mislabeled ☐</td><td style="border: none;">Finish ☐</td></tr> <tr><td style="border: none;">Instructions Incomplete/Unclear ☐</td><td style="border: none;">Fit/Function ☐</td><td style="border: none;">Misread ☐</td></tr> <tr><td style="border: none;">Drill Holes ☐</td><td style="border: none;">Misaligned/off center ☐</td><td style="border: none;">Turning Sequence ☐</td></tr> </table>			Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Countersink ☐	Off-set ☐	Drawing ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Environment ☐	No Re-verification ☐																																																																			
Design ☐	Operator ☐																																																																			
Doc/Data ☐	Offset/Setup ☐																																																																			
Equip/Tooling ☐	Supplier ☐																																																																			
Handling/Pre ☐	Training ☐																																																																			
Material ☐	Use for Testing ☐																																																																			
Internal Transport ☐	Poor Information ☐																																																																			
Tribal Knowledge ☐	Rushing ☐																																																																			
LOA ☐	Product Improvement ☐																																																																			
Substation ☐	Process Improvement ☐																																																																			
Past Expiry Date ☐	Manufacturing Process ☐																																																																			
Misidentified ☐	Past Due ☐																																																																			
Pressure/Forced ☐																																																																				
Bending ☐																																																																				
Centre Not Concentric ☐																																																																				
Cracks ☐																																																																				
Crimp/Kink/Ripple/Wave ☐																																																																				
Cuffs ☐																																																																				
Crushing ☐																																																																				
Heat Treat ☐																																																																				
Wave/Twist in Tube ☐																																																																				
Marks/Chatter ☐																																																																				
Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																																		
Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																																																																		
BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																																		
Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																		
Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																		
Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																		
Countersink ☐	Off-set ☐	Drawing ☐																																																																		
Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																		
Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																		
Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																		
OTHER : _____																																																																				

Picklist Print

Monday, September 12, 2016 8:53:18 AM

Work Order ID: 150960

150960

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016

Required Date: 9/12/2016

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-20

Purchased

No

100

Each

99.0000

2

2

MS27039-1-20

Screw

DAS
27
9-89

Location

Loc Qty

Loc Code

ST280

99

124326

99

OCT 04 2016

DAS
28
9-89

MS27039-1-21

Purchased

No

100

Each

253.0000

4

4

MS27039-1-21

Screw

DAS
27
9-89

Location

Loc Qty

Loc Code

ST280

253

m127904

253

OCT 04 2016

DAS
28
9-89

NAS1149F0332P

Purchased

No

100

Each

2,536.000

144

144

NAS1149F0332P

Washer

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

282

m133709

282

ST262

2254

m135058

254

m135544

2000

OCT 04 2016

DAS
28
9-89

NAS1149F0363P

Purchased

No

100

Each

240.0000

2

2

NAS1149F0363P

WASHER

DAS
27
9-89

Location

Loc Qty

Loc Code

ST262

240

124555

240

OCT 04 2016

DAS
28
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																									
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																										
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																										
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																										
Large Fab ☐	Composite ☐	Supplier ☐																																																																											
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																																																																									
Description Work Order Deviation		Disposition		Completed By																																																																									
				Lead hand / Supervisor Approval Verification																																																																									
				QC / QA Coordinator Approval																																																																									
<table style="width:100%; border: none;"> <tr> <td colspan="2" style="text-align: center; vertical-align: top;"> Root Cause <table style="width:100%; border: none;"> <tr><td style="border: none;">Environment ☐</td><td style="border: none;">No Re-verification ☐</td></tr> <tr><td style="border: none;">Design ☐</td><td style="border: none;">Operator ☐</td></tr> <tr><td style="border: none;">Doc/Data ☐</td><td style="border: none;">Offset/Setup ☐</td></tr> <tr><td style="border: none;">Equip/Tooling ☐</td><td style="border: none;">Supplier ☐</td></tr> <tr><td style="border: none;">Handling/Pre ☐</td><td style="border: none;">Training ☐</td></tr> <tr><td style="border: none;">Material ☐</td><td style="border: none;">Use for Testing ☐</td></tr> <tr><td style="border: none;">Internal Transport ☐</td><td style="border: none;">Poor Information ☐</td></tr> <tr><td style="border: none;">Tribal Knowledge ☐</td><td style="border: none;">Rushing ☐</td></tr> <tr><td style="border: none;">LOA ☐</td><td style="border: none;">Product Improvement ☐</td></tr> <tr><td style="border: none;">Substation ☐</td><td style="border: none;">Process Improvement ☐</td></tr> <tr><td style="border: none;">Past Expiry Date ☐</td><td style="border: none;">Manufacturing Process ☐</td></tr> <tr><td style="border: none;">Misidentified ☐</td><td style="border: none;">Past Due ☐</td></tr> </table> </td> <td colspan="3" style="text-align: center; vertical-align: top;"> FAULT CATEGORY <table style="width:100%; border: none;"> <tr><td style="border: none;">Pressure/Forced ☐</td><td style="border: none;">Temperature/Cure ☐</td><td style="border: none;">Power Loss/Surge ☐</td><td style="border: none;">Positioned Wrong ☐</td></tr> <tr><td style="border: none;">Bending ☐</td><td style="border: none;">Set-up ☐</td><td style="border: none;">Folio/Program ☐</td><td style="border: none;">Outside Dimensions ☐</td></tr> <tr><td style="border: none;">Centre Not Concentric ☐</td><td style="border: none;">BOM/Route ☐</td><td style="border: none;">Grain ☐</td><td style="border: none;">Over/Under tolerance ☐</td></tr> <tr><td style="border: none;">Cracks ☐</td><td style="border: none;">Broken/Damage/Defect ☐</td><td style="border: none;">Weld ☐</td><td style="border: none;">Part Incorrect ☐</td></tr> <tr><td style="border: none;">Crimp/Kink/Ripple/Wave ☐</td><td style="border: none;">Inspection Incomplete/Unqualified ☐</td><td style="border: none;">Wrong Stock Pulled ☐</td><td style="border: none;">Part Lost/Missing ☐</td></tr> <tr><td style="border: none;">Cuffs ☐</td><td style="border: none;">Contamination ☐</td><td style="border: none;">Out of Sequence ☐</td><td style="border: none;">Part Moved ☐</td></tr> <tr><td style="border: none;">Crushing ☐</td><td style="border: none;">Countersink ☐</td><td style="border: none;">Off-set ☐</td><td style="border: none;">Drawing ☐</td></tr> <tr><td style="border: none;">Heat Treat ☐</td><td style="border: none;">Cut Too Short ☐</td><td style="border: none;">Mislabeled ☐</td><td style="border: none;">Finish ☐</td></tr> <tr><td style="border: none;">Wave/Twist in Tube ☐</td><td style="border: none;">Instructions Incomplete/Unclear ☐</td><td style="border: none;">Fit/Function ☐</td><td style="border: none;">Misread ☐</td></tr> <tr><td style="border: none;">Marks/Chatter ☐</td><td style="border: none;">Drill Holes ☐</td><td style="border: none;">Misaligned/off center ☐</td><td style="border: none;">Turning Sequence ☐</td></tr> </table> </td> </tr> <tr> <td colspan="4" style="vertical-align: top;">OTHER : _____</td> </tr> </table>					Root Cause <table style="width:100%; border: none;"> <tr><td style="border: none;">Environment ☐</td><td style="border: none;">No Re-verification ☐</td></tr> <tr><td style="border: none;">Design ☐</td><td style="border: none;">Operator ☐</td></tr> <tr><td style="border: none;">Doc/Data ☐</td><td style="border: none;">Offset/Setup ☐</td></tr> <tr><td style="border: none;">Equip/Tooling ☐</td><td style="border: none;">Supplier ☐</td></tr> <tr><td style="border: none;">Handling/Pre ☐</td><td style="border: none;">Training ☐</td></tr> <tr><td style="border: none;">Material ☐</td><td style="border: none;">Use for Testing ☐</td></tr> <tr><td style="border: none;">Internal Transport ☐</td><td style="border: none;">Poor Information ☐</td></tr> <tr><td style="border: none;">Tribal Knowledge ☐</td><td style="border: none;">Rushing ☐</td></tr> <tr><td style="border: none;">LOA ☐</td><td style="border: none;">Product Improvement ☐</td></tr> <tr><td style="border: none;">Substation ☐</td><td style="border: none;">Process Improvement ☐</td></tr> <tr><td style="border: none;">Past Expiry Date ☐</td><td style="border: none;">Manufacturing Process ☐</td></tr> <tr><td style="border: none;">Misidentified ☐</td><td style="border: none;">Past Due ☐</td></tr> </table>		Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	FAULT CATEGORY <table style="width:100%; border: none;"> <tr><td style="border: none;">Pressure/Forced ☐</td><td style="border: none;">Temperature/Cure ☐</td><td style="border: none;">Power Loss/Surge ☐</td><td style="border: none;">Positioned Wrong ☐</td></tr> <tr><td style="border: none;">Bending ☐</td><td style="border: none;">Set-up ☐</td><td style="border: none;">Folio/Program ☐</td><td style="border: none;">Outside Dimensions ☐</td></tr> <tr><td style="border: none;">Centre Not Concentric ☐</td><td style="border: none;">BOM/Route ☐</td><td style="border: none;">Grain ☐</td><td style="border: none;">Over/Under tolerance ☐</td></tr> <tr><td style="border: none;">Cracks ☐</td><td style="border: none;">Broken/Damage/Defect ☐</td><td style="border: none;">Weld ☐</td><td style="border: none;">Part Incorrect ☐</td></tr> <tr><td style="border: none;">Crimp/Kink/Ripple/Wave ☐</td><td style="border: none;">Inspection Incomplete/Unqualified ☐</td><td style="border: none;">Wrong Stock Pulled ☐</td><td style="border: none;">Part Lost/Missing ☐</td></tr> <tr><td style="border: none;">Cuffs ☐</td><td style="border: none;">Contamination ☐</td><td style="border: none;">Out of Sequence ☐</td><td style="border: none;">Part Moved ☐</td></tr> <tr><td style="border: none;">Crushing ☐</td><td style="border: none;">Countersink ☐</td><td style="border: none;">Off-set ☐</td><td style="border: none;">Drawing ☐</td></tr> <tr><td style="border: none;">Heat Treat ☐</td><td style="border: none;">Cut Too Short ☐</td><td style="border: none;">Mislabeled ☐</td><td style="border: none;">Finish ☐</td></tr> <tr><td style="border: none;">Wave/Twist in Tube ☐</td><td style="border: none;">Instructions Incomplete/Unclear ☐</td><td style="border: none;">Fit/Function ☐</td><td style="border: none;">Misread ☐</td></tr> <tr><td style="border: none;">Marks/Chatter ☐</td><td style="border: none;">Drill Holes ☐</td><td style="border: none;">Misaligned/off center ☐</td><td style="border: none;">Turning Sequence ☐</td></tr> </table>			Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	OTHER : _____			
Root Cause <table style="width:100%; border: none;"> <tr><td style="border: none;">Environment ☐</td><td style="border: none;">No Re-verification ☐</td></tr> <tr><td style="border: none;">Design ☐</td><td style="border: none;">Operator ☐</td></tr> <tr><td style="border: none;">Doc/Data ☐</td><td style="border: none;">Offset/Setup ☐</td></tr> <tr><td style="border: none;">Equip/Tooling ☐</td><td style="border: none;">Supplier ☐</td></tr> <tr><td style="border: none;">Handling/Pre ☐</td><td style="border: none;">Training ☐</td></tr> <tr><td style="border: none;">Material ☐</td><td style="border: none;">Use for Testing ☐</td></tr> <tr><td style="border: none;">Internal Transport ☐</td><td style="border: none;">Poor Information ☐</td></tr> <tr><td style="border: none;">Tribal Knowledge ☐</td><td style="border: none;">Rushing ☐</td></tr> <tr><td style="border: none;">LOA ☐</td><td style="border: none;">Product Improvement ☐</td></tr> <tr><td style="border: none;">Substation ☐</td><td style="border: none;">Process Improvement ☐</td></tr> <tr><td style="border: none;">Past Expiry Date ☐</td><td style="border: none;">Manufacturing Process ☐</td></tr> <tr><td style="border: none;">Misidentified ☐</td><td style="border: none;">Past Due ☐</td></tr> </table>		Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	FAULT CATEGORY <table style="width:100%; border: none;"> <tr><td style="border: none;">Pressure/Forced ☐</td><td style="border: none;">Temperature/Cure ☐</td><td style="border: none;">Power Loss/Surge ☐</td><td style="border: none;">Positioned Wrong ☐</td></tr> <tr><td style="border: none;">Bending ☐</td><td style="border: none;">Set-up ☐</td><td style="border: none;">Folio/Program ☐</td><td style="border: none;">Outside Dimensions ☐</td></tr> <tr><td style="border: none;">Centre Not Concentric ☐</td><td style="border: none;">BOM/Route ☐</td><td style="border: none;">Grain ☐</td><td style="border: none;">Over/Under tolerance ☐</td></tr> <tr><td style="border: none;">Cracks ☐</td><td style="border: none;">Broken/Damage/Defect ☐</td><td style="border: none;">Weld ☐</td><td style="border: none;">Part Incorrect ☐</td></tr> <tr><td style="border: none;">Crimp/Kink/Ripple/Wave ☐</td><td style="border: none;">Inspection Incomplete/Unqualified ☐</td><td style="border: none;">Wrong Stock Pulled ☐</td><td style="border: none;">Part Lost/Missing ☐</td></tr> <tr><td style="border: none;">Cuffs ☐</td><td style="border: none;">Contamination ☐</td><td style="border: none;">Out of Sequence ☐</td><td style="border: none;">Part Moved ☐</td></tr> <tr><td style="border: none;">Crushing ☐</td><td style="border: none;">Countersink ☐</td><td style="border: none;">Off-set ☐</td><td style="border: none;">Drawing ☐</td></tr> <tr><td style="border: none;">Heat Treat ☐</td><td style="border: none;">Cut Too Short ☐</td><td style="border: none;">Mislabeled ☐</td><td style="border: none;">Finish ☐</td></tr> <tr><td style="border: none;">Wave/Twist in Tube ☐</td><td style="border: none;">Instructions Incomplete/Unclear ☐</td><td style="border: none;">Fit/Function ☐</td><td style="border: none;">Misread ☐</td></tr> <tr><td style="border: none;">Marks/Chatter ☐</td><td style="border: none;">Drill Holes ☐</td><td style="border: none;">Misaligned/off center ☐</td><td style="border: none;">Turning Sequence ☐</td></tr> </table>			Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐									
Environment ☐	No Re-verification ☐																																																																												
Design ☐	Operator ☐																																																																												
Doc/Data ☐	Offset/Setup ☐																																																																												
Equip/Tooling ☐	Supplier ☐																																																																												
Handling/Pre ☐	Training ☐																																																																												
Material ☐	Use for Testing ☐																																																																												
Internal Transport ☐	Poor Information ☐																																																																												
Tribal Knowledge ☐	Rushing ☐																																																																												
LOA ☐	Product Improvement ☐																																																																												
Substation ☐	Process Improvement ☐																																																																												
Past Expiry Date ☐	Manufacturing Process ☐																																																																												
Misidentified ☐	Past Due ☐																																																																												
Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																																										
Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																																																																										
Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																																										
Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																										
Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																										
Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																										
Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																																																																										
Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																										
Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																										
Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																										
OTHER : _____																																																																													

Picklist Print

Page 19

Monday, September 12, 2016 8:53:18 AM

Work Order ID: 150960

150960

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 9/2/2016

Required Date: 9/12/2016

Start Qty: 1.00

Required Qty: 1.00

NAS1149F0432P

Purchased

No

100

Each

799.0000

4

4

NAS1149F0432P

WASHER

DAS
27
9-89

Location

Loc Qty

Loc Code

ST262

799

M134955

799

4

NAS1149FN832P

Purchased

No

100

Each

3,153.000

4

4

NAS1149FN832P

Washer

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

1553

M133316

16

M133769

89

M135058

1448

ST263

1600

M135603

1600

OCT 04 2016

DAS
28
9-89

OCT 04 2016

DAS
28
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																		
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																		
Large Fab ☐	Composite ☐	Supplier ☐																			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																	
Description Work Order Deviation		Disposition		Completed By																	
				Lead hand / Supervisor Approval Verification																	
				QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																
OTHER :																					



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.

05304

SHEET 1 OF 1

DWG NO. 646.4000

REV: C

PREPARED BY J. BECKER

DATE: 02/04/16

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: AS350 CABLE CUTTERS KIT

APPROVED BY:

ENGR

MFG

QC

EFF. NEXT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: REVISED F/N 12.

ECR: N/A

ACTION ITEM:
1. N/A

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 150960 MLJ
16-09-12

SHEET 1, BOM IS:

12	R	601.1624	8	16	LOCKNUT	MS21042L3	
F/N	TC	PART NUMBER	4006	4005	DESCRIPTION	MATERIAL	SPECIFICATION
			QTY				
DOCUMENTS EFFECTED:					CHANGE CATEGORY	DER REVIEW REQUIRED	
☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM					☐ MAJOR ☒ MINOR	☐ YES ☒ NO	

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE EXPRESS WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.

NOTES:

1 AFTER INSTALLATION, APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.

2 INSTALL F/N 14 WITH F/N 52 & 53.

3 3M VHB ADHESIVE TAPE .025" THICK X .50" WIDE
VENDOR: MCMMASTER-CARR P/N 75935A651.

4 3M TAPE PRIMER 94, APPLY TO BOTH SURFACES A/R BEFORE TAPE.
VENDOR: R.S. HUGHES P/N 021200-24216.

5 REUSE FASTENERS FROM F/N 1.

6 USE WASHERS A/R AS SHIMS TO OBTAIN BEST FITMENT.

7 AT CUSTOMERS OPTION, INSTALL F/N 65 BY MATCH DRILLING ON TO F/N 1.

8 INSTALL SHIM IF OEM PROVISIONS ARE INSTALLED ON AIRCRAFT. REMOVE SHIM LAYERS TO ACHIEVE CORRECT SIZE. MATCH DRILL HOLES. USE F/N 78 SCREW IN PLACE OF F/N 17 SCREW.

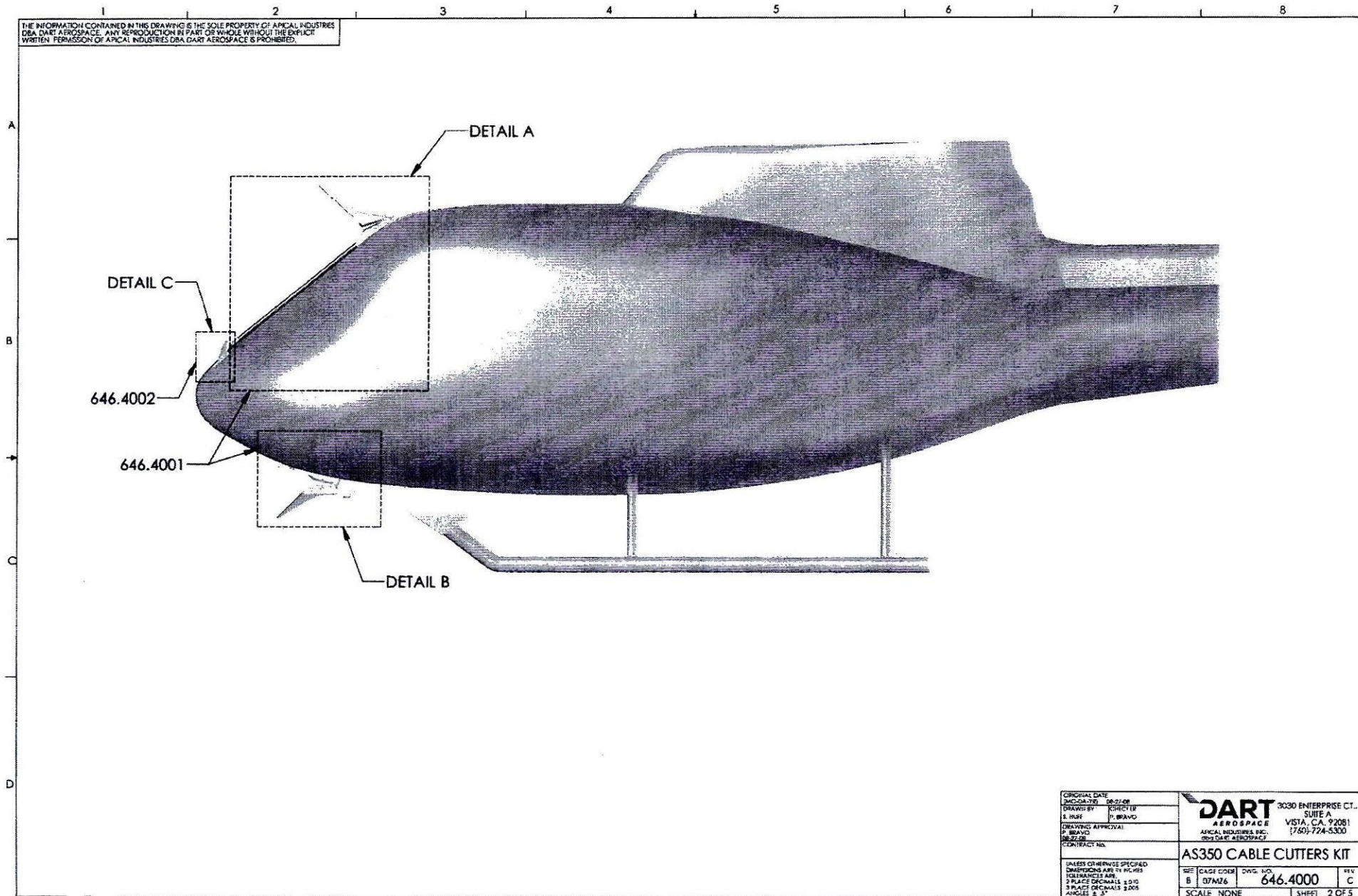
9 NEWER INSTALLATIONS ON AIRCRAFT WITH UPDATED CANOPY MAY REQUIRE DIFFERENT LENGTH SCREWS. USE F/N 62 TO REPLACE F/N 44 & F/N 26 IN PLACE OF F/N 41 WHEN NECESSARY.

UNINCORPORATED ECN(S)

05204

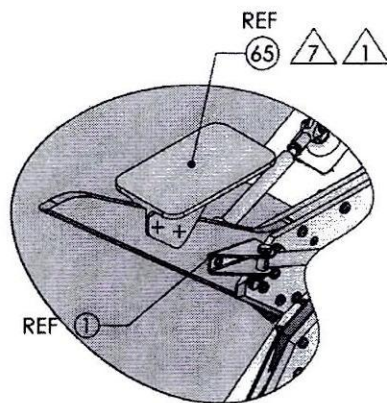
	5	5	5	78	601.3875	SCREW	MS20445-554
	1	1	1	77	646.9410	SHIM	
		4	4	76	601.2764	WASHER	MS1149W432P
		2	2	75	601.2973	LOCKNUT	MS21042-08
		2	2	74	601.2988	SCREW	MS21039-0813
		2	2	73	601.2943	LOCKNUT	MS21042-3
		2	2	72	601.3128	NUT	AN316C4R
		2	2	71	601.3209	LOCKNUT	MS21042-4
		4	4	70	601.2638	WASHER	MS1149W432P
		2	2	69	601.2669	BOLT	AN4C7A
		2	2	68	601.3119	CLEVIS	AN4AS-34R
		2	2	67	601.3121	EYE BOLT	AN4A-SA
		2	2	66	650.9201	EYE BRACKET ASSY	
	REF	REF	REF	65	647.5701	GPS MOUNT KIT	
			2	64	601.3151	WASHER	MS1149W432P
		2		63	601.2911	SCREW	MS24694550
		24	24	62	601.2637	SCREW	MS27039-1-16
	2	2	2	61	601.2763	BOLT	AN3-12A
		1	1	60	646.3913	SHIM	
		4	4	59	646.3912	SHIM	
		1	1	58	646.3911	SHIM	
		4	4	57	646.3910	SHIM	
		5	5	56	600.1013	PRIMER	
	8 FT	8 FT	55	600.0129	VHB TAPE		
		1	1	54	600.1012	SEALANT	PR-1425 CLASS B
		1	1	53	600.0991	MAGNABOND 6378 PART B	
		1	1	52	600.0990	MAGNABOND 6378 PART A	
	6	10	10	51	601.2826	BOLT	AN3-11A
			2	50	646.3814	WIPER BRACKET	
			2	49	601.2910	SCREW	MS27039-1-16
		2	2	48	601.1365	SCREW	MS27039-1-10
		2	2	47	646.3719	DOUBLER	
		2	2	46	646.3718	CUSTOM WASHER	
		1	1	45	646.3717	DOUBLER	
		22	22	44	601.1948	SCREW	MS27039-1-19
		2	2	43	601.1952	SCREW	MS27039-1-20
		4	4	42	601.1956	SCREW	MS27039-1-21
4006	4005	4004	4003	4002	4001	4000	
				FIND #	PART #	DESCRIPTION	MATL
							SPEC.

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES
 DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE EXPLICIT
 WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.

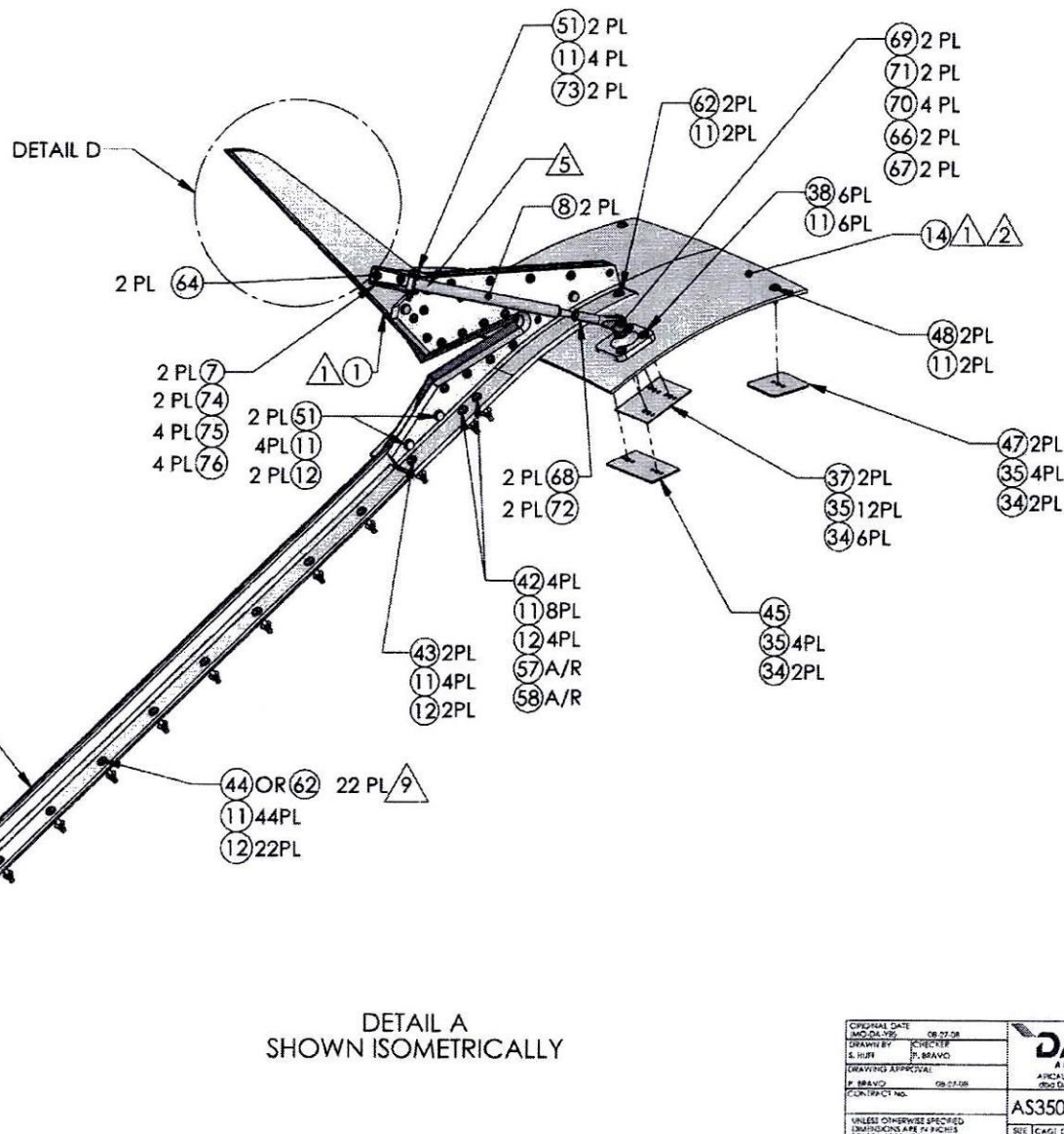


ORIGINAL DATE 08-21-08		3030 ENTERPRISE CT., SUITE A	
DRAWN BY S. HUSE		VISTA, CA 92081	
CHECKED BY P. BRAYO		(760) 724-5300	
DRAWING APPROVAL P. BRAYO		APICAL INDUSTRIES INC. DBA DART AEROSPACE	
CONTRACT NO.		AS350 CABLE CUTTERS KIT	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACES DECIMALS ± .005 ANGLES ± .5°		REV B	REV C
SCALE NONE		SHEET 2 OF 5	

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF AFICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF AFICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



DETAIL D
TYPICAL GPS MOUNT KIT INSTALLATION



DETAIL A
SHOWN ISOMETRICALLY

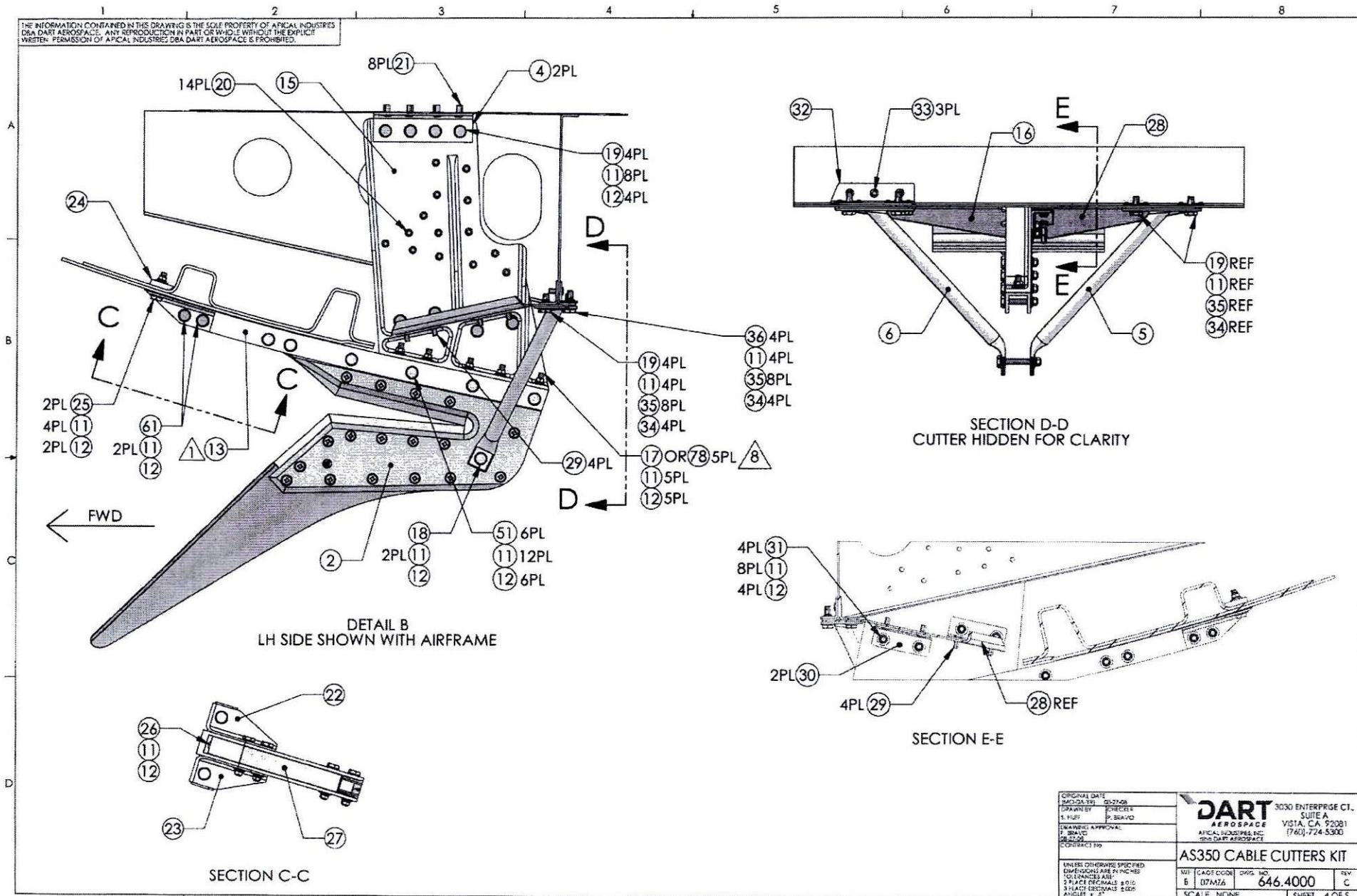
CHARGE DATE MODAL-VP	07-27-08	 DART AEROSPACE AIRCRAFT MANUFACTURING 3030 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760)-724-5300
DRAWN BY S. WIFE	C. KENT P. BRAYCO	
DRAWING APPROVAL P. BRAYCO	07-28-08	
CONTRACT NO.		

AS350 CABLE CUTTERS KIT

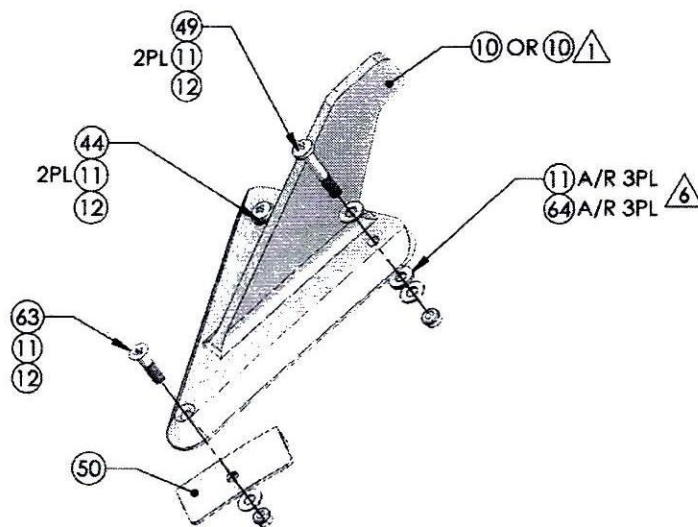
REV	CHG CODE	DATE	BY
B	D7M36	646	ANG
SCALE NONE		SHEET	3 OF 5

UNLESS OTHERWISE SPECIFIED:
 1/8" DIA. ROUNDS TO 3/16" RADIUS
 1/4" DIA. ROUNDS TO 3/8" RADIUS
 3/8" DIA. ROUNDS TO 1/2" RADIUS
 1/2" DIA. ROUNDS TO 5/8" RADIUS
 5/8" DIA. ROUNDS TO 3/4" RADIUS
 3/4" DIA. ROUNDS TO 1" RADIUS
 1" DIA. ROUNDS TO 1 1/4" RADIUS
 1 1/4" DIA. ROUNDS TO 1 1/2" RADIUS
 1 1/2" DIA. ROUNDS TO 1 3/4" RADIUS
 1 3/4" DIA. ROUNDS TO 2" RADIUS
 2" DIA. ROUNDS TO 2 1/4" RADIUS
 2 1/4" DIA. ROUNDS TO 2 1/2" RADIUS
 2 1/2" DIA. ROUNDS TO 2 3/4" RADIUS
 2 3/4" DIA. ROUNDS TO 3" RADIUS
 3" DIA. ROUNDS TO 3 1/4" RADIUS
 3 1/4" DIA. ROUNDS TO 3 1/2" RADIUS
 3 1/2" DIA. ROUNDS TO 3 3/4" RADIUS
 3 3/4" DIA. ROUNDS TO 4" RADIUS
 4" DIA. ROUNDS TO 4 1/4" RADIUS
 4 1/4" DIA. ROUNDS TO 4 1/2" RADIUS
 4 1/2" DIA. ROUNDS TO 4 3/4" RADIUS
 4 3/4" DIA. ROUNDS TO 5" RADIUS
 5" DIA. ROUNDS TO 5 1/4" RADIUS
 5 1/4" DIA. ROUNDS TO 5 1/2" RADIUS
 5 1/2" DIA. ROUNDS TO 5 3/4" RADIUS
 5 3/4" DIA. ROUNDS TO 6" RADIUS
 6" DIA. ROUNDS TO 6 1/4" RADIUS
 6 1/4" DIA. ROUNDS TO 6 1/2" RADIUS
 6 1/2" DIA. ROUNDS TO 6 3/4" RADIUS
 6 3/4" DIA. ROUNDS TO 7" RADIUS
 7" DIA. ROUNDS TO 7 1/4" RADIUS
 7 1/4" DIA. ROUNDS TO 7 1/2" RADIUS
 7 1/2" DIA. ROUNDS TO 7 3/4" RADIUS
 7 3/4" DIA. ROUNDS TO 8" RADIUS
 8" DIA. ROUNDS TO 8 1/4" RADIUS
 8 1/4" DIA. ROUNDS TO 8 1/2" RADIUS
 8 1/2" DIA. ROUNDS TO 8 3/4" RADIUS
 8 3/4" DIA. ROUNDS TO 9" RADIUS
 9" DIA. ROUNDS TO 9 1/4" RADIUS
 9 1/4" DIA. ROUNDS TO 9 1/2" RADIUS
 9 1/2" DIA. ROUNDS TO 9 3/4" RADIUS
 9 3/4" DIA. ROUNDS TO 10" RADIUS
 10" DIA. ROUNDS TO 10 1/4" RADIUS
 10 1/4" DIA. ROUNDS TO 10 1/2" RADIUS
 10 1/2" DIA. ROUNDS TO 10 3/4" RADIUS
 10 3/4" DIA. ROUNDS TO 11" RADIUS
 11" DIA. ROUNDS TO 11 1/4" RADIUS
 11 1/4" DIA. ROUNDS TO 11 1/2" RADIUS
 11 1/2" DIA. ROUNDS TO 11 3/4" RADIUS
 11 3/4" DIA. ROUNDS TO 12" RADIUS
 12" DIA. ROUNDS TO 12 1/4" RADIUS
 12 1/4" DIA. ROUNDS TO 12 1/2" RADIUS
 12 1/2" DIA. ROUNDS TO 12 3/4" RADIUS
 12 3/4" DIA. ROUNDS TO 13" RADIUS
 13" DIA. ROUNDS TO 13 1/4" RADIUS
 13 1/4" DIA. ROUNDS TO 13 1/2" RADIUS
 13 1/2" DIA. ROUNDS TO 13 3/4" RADIUS
 13 3/4" DIA. ROUNDS TO 14" RADIUS
 14" DIA. ROUNDS TO 14 1/4" RADIUS
 14 1/4" DIA. ROUNDS TO 14 1/2" RADIUS
 14 1/2" DIA. ROUNDS TO 14 3/4" RADIUS
 14 3/4" DIA. ROUNDS TO 15" RADIUS
 15" DIA. ROUNDS TO 15 1/4" RADIUS
 15 1/4" DIA. ROUNDS TO 15 1/2" RADIUS
 15 1/2" DIA. ROUNDS TO 15 3/4" RADIUS
 15 3/4" DIA. ROUNDS TO 16" RADIUS
 16" DIA. ROUNDS TO 16 1/4" RADIUS
 16 1/4" DIA. ROUNDS TO 16 1/2" RADIUS
 16 1/2" DIA. ROUNDS TO 16 3/4" RADIUS
 16 3/4" DIA. ROUNDS TO 17" RADIUS
 17" DIA. ROUNDS TO 17 1/4" RADIUS
 17 1/4" DIA. ROUNDS TO 17 1/2" RADIUS
 17 1/2" DIA. ROUNDS TO 17 3/4" RADIUS
 17 3/4" DIA. ROUNDS TO 18" RADIUS
 18" DIA. ROUNDS TO 18 1/4" RADIUS
 18 1/4" DIA. ROUNDS TO 18 1/2" RADIUS
 18 1/2" DIA. ROUNDS TO 18 3/4" RADIUS
 18 3/4" DIA. ROUNDS TO 19" RADIUS
 19" DIA. ROUNDS TO 19 1/4" RADIUS
 19 1/4" DIA. ROUNDS TO 19 1/2" RADIUS
 19 1/2" DIA. ROUNDS TO 19 3/4" RADIUS
 19 3/4" DIA. ROUNDS TO 20" RADIUS
 20" DIA. ROUNDS TO 20 1/4" RADIUS
 20 1/4" DIA. ROUNDS TO 20 1/2" RADIUS
 20 1/2" DIA. ROUNDS TO 20 3/4" RADIUS
 20 3/4" DIA. ROUNDS TO 21" RADIUS
 21" DIA. ROUNDS TO 21 1/4" RADIUS
 21 1/4" DIA. ROUNDS TO 21 1/2" RADIUS
 21 1/2" DIA. ROUNDS TO 21 3/4" RADIUS
 21 3/4" DIA. ROUNDS TO 22" RADIUS
 22" DIA. ROUNDS TO 22 1/4" RADIUS
 22 1/4" DIA. ROUNDS TO 22 1/2" RADIUS
 22 1/2" DIA. ROUNDS TO 22 3/4" RADIUS
 22 3/4" DIA. ROUNDS TO 23" RADIUS
 23" DIA. ROUNDS TO 23 1/4" RADIUS
 23 1/4" DIA. ROUNDS TO 23 1/2" RADIUS
 23 1/2" DIA. ROUNDS TO 23 3/4" RADIUS
 23 3/4" DIA. ROUNDS TO 24" RADIUS
 24" DIA. ROUNDS TO 24 1/4" RADIUS
 24 1/4" DIA. ROUNDS TO 24 1/2" RADIUS
 24 1/2" DIA. ROUNDS TO 24 3/4" RADIUS
 24 3/4" DIA. ROUNDS TO 25" RADIUS
 25" DIA. ROUNDS TO 25 1/4" RADIUS
 25 1/4" DIA. ROUNDS TO 25 1/2" RADIUS
 25 1/2" DIA. ROUNDS TO 25 3/4" RADIUS
 25 3/4" DIA. ROUNDS TO 26" RADIUS
 26" DIA. ROUNDS TO 26 1/4" RADIUS
 26 1/4" DIA. ROUNDS TO 26 1/2" RADIUS
 26 1/2" DIA. ROUNDS TO 26 3/4" RADIUS
 26 3/4" DIA. ROUNDS TO 27" RADIUS
 27" DIA. ROUNDS TO 27 1/4" RADIUS
 27 1/4" DIA. ROUNDS TO 27 1/2" RADIUS
 27 1/2" DIA. ROUNDS TO 27 3/4" RADIUS
 27 3/4" DIA. ROUNDS TO 28" RADIUS
 28" DIA. ROUNDS TO 28 1/4" RADIUS
 28 1/4" DIA. ROUNDS TO 28 1/2" RADIUS
 28 1/2" DIA. ROUNDS TO 28 3/4" RADIUS
 28 3/4" DIA. ROUNDS TO 29" RADIUS
 29" DIA. ROUNDS TO 29 1/4" RADIUS
 29 1/4" DIA. ROUNDS TO 29 1/2" RADIUS
 29 1/2" DIA. ROUNDS TO 29 3/4" RADIUS
 29 3/4" DIA. ROUNDS TO 30" RADIUS
 30" DIA. ROUNDS TO 30 1/4" RADIUS
 30 1/4" DIA. ROUNDS TO 30 1/2" RADIUS
 30 1/2" DIA. ROUNDS TO 30 3/4" RADIUS
 30 3/4" DIA. ROUNDS TO 31" RADIUS
 31" DIA. ROUNDS TO 31 1/4" RADIUS
 31 1/4" DIA. ROUNDS TO 31 1/2" RADIUS
 31 1/2" DIA. ROUNDS TO 31 3/4" RADIUS
 31 3/4" DIA. ROUNDS TO 32" RADIUS
 32" DIA. ROUNDS TO 32 1/4" RADIUS
 32 1/4" DIA. ROUNDS TO 32 1/2" RADIUS
 32 1/2" DIA. ROUNDS TO 32 3/4" RADIUS
 32 3/4" DIA. ROUNDS TO 33" RADIUS
 33" DIA. ROUNDS TO 33 1/4" RADIUS
 33 1/4" DIA. ROUNDS TO 33 1/2" RADIUS
 33 1/2" DIA. ROUNDS TO 33 3/4" RADIUS
 33 3/4" DIA. ROUNDS TO 34" RADIUS
 34" DIA. ROUNDS TO 34 1/4" RADIUS
 34 1/4" DIA. ROUNDS TO 34 1/2" RADIUS
 34 1/2" DIA. ROUNDS TO 34 3/4" RADIUS
 34 3/4" DIA. ROUNDS TO 35" RADIUS
 35" DIA. ROUNDS TO 35 1/4" RADIUS
 35 1/4" DIA. ROUNDS TO 35 1/2" RADIUS
 35 1/2" DIA. ROUNDS TO 35 3/4" RADIUS
 35 3/4" DIA. ROUNDS TO 36" RADIUS
 36" DIA. ROUNDS TO 36 1/4" RADIUS
 36 1/4" DIA. ROUNDS TO 36 1/2" RADIUS
 36 1/2" DIA. ROUNDS TO 36 3/4" RADIUS
 36 3/4" DIA. ROUNDS TO 37" RADIUS

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES
DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE EXPLICIT
WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.



THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES
DEA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE EXPRESS
WRITTEN PERMISSION OF APICAL INDUSTRIES DEA DART AEROSPACE IS PROHIBITED.



DETAIL C
LH SHOWN EXPLODED
RH OPPOSITE

ORIGINAL DATE 08-27-08		3030 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760)-724-5300	
DRAWN BY S. HUI		CHECKED BY P. BRAVO	
DRAWING APPROVAL P. BRAVO 08-27-08		APICAL INDUSTRIES, INC. DEA DART AEROSPACE	
CONTRACT NO.		AS350 CABLE CUTTERS KIT	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS .005 3 PLACE DECIMALS .0005 ANGLES .5°		SEE 8	CLAMP CLASH 07/12/08
DWG. NO. 646.4000		REV. C	SCALE NONE
SHEET 5 OF 5		SHEET 5 OF 5	

REF. ONLY

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES DBA DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE EXPLICIT WRITTEN PERMISSION OF APICAL INDUSTRIES DBA DART AEROSPACE IS PROHIBITED.

- NOTES:
- 1 AFTER INSTALLATION, APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.
 - 2 INSTALL F/N 14 WITH F/N 52 & 53.
 - 3 3M VHB ADHESIVE TAPE .025" THICK X .50" WIDE
VENDOR: MCMASER-CARR P/N 75935A651.
 - 4 3M TAPE PRIMER 94. APPLY TO BOTH SURFACES A/R BEFORE TAPE.
VENDOR: R.S. HUGHES P/N 021200-24216.
 - 5 REUSE FASTENERS FROM F/N 1.
 - 6 USE WASHERS A/R AS SHIMS TO OBTAIN BEST FITMENT.
 - 7 AT CUSTOMERS OPTION, INSTALL F/N 65 BY MATCH DRILLING ON TO F/N 1.
 - 8 INSTALL SHIM IF OEM PROVISIONS ARE INSTALLED ON AIRCRAFT. REMOVE SHIM LAYERS TO ACHIEVE CORRECT SIZE. MATCH DRILL HOLES. USE F/N 78 SCREW IN PLACE OF F/N 17 SCREW.
 - 9 NEWER INSTALLATIONS ON AIRCRAFT WITH UPDATED CANOPY MAY REQUIRE DIFFERENT LENGTH SCREWS. USE F/N 62 TO REPLACE F/N 44 & F/N 26 IN PLACE OF F/N 41 WHEN NECESSARY.

UNINCORPORATED ECN(s)

05304

5	5	5	78	601.3875	SCREW					
1	1	1	77	646.9410	SHIM					
	4	4	76	601.2764	WASHER	NAS1149H802P				
	2	2	75	601.2973	LOCKNUT	MS21042GB				
	2	2	74	601.2988	SCREW	MS21039-1B13				
	2	2	73	601.2943	LOCKNUT	MS21042-3				
	2	2	72	601.3128	NUT	AN516C4R				
	2	2	71	601.3209	LOCKNUT	MS21042-4				
	4	4	70	601.2638	WASHER	NAS1149FD432P				
	2	2	69	601.2669	BOLT	ANMC7A				
	2	2	68	601.3119	CLEVIS	AN6A5-34R				
	2	2	67	601.3121	EYE BOLT	AN6A-5A				
	2	2	66	650.9201	EYE BRACKET ASSY					
	REF	REF	65	647.5701	GPS MOUNT KIT					
		2	64	601.3151	WASHER	NAS1149FD063P				
		2	63	601.2911	SCREW	MS246P4553				
	24	24	62	601.2637	SCREW	MS27039-1-16				
2	2	2	61	601.2763	BOLT	AN3-12A				
	1	1	60	646.3913	SHIM					
	4	4	59	646.3912	SHIM					
	1	1	58	646.3911	SHIM					
	4	4	57	646.3910	SHIM					
	5	5	56	600.1013	PRIMER					
	8 FT	8 FT	55	600.0129	VHB TAPE					
	1	1	54	600.1012	SEALANT	PG 1425 CLASS B				
	1	1	53	600.0991	MAGNABOND 6398 PART B					
	1	1	52	600.0990	MAGNABOND 6398 PART A					
6	10	10	51	601.2826	BOLT	AN3-11A				
		2	50	646.3814	WIPER BRACKET					
		2	49	601.2910	SCREW	MS27039-1-18				
	2	2	48	601.1365	SCREW	MS27039-1-10				
	2	2	47	646.3719	DOUBLER					
	2	2	46	646.3718	CUSTOM WASHER					
	1	1	45	646.3717	DOUBLER					
	22	2	44	601.1948	SCREW	MS27039-1-19				
	2	2	43	601.1952	SCREW	MS27039-1-20				
	4	4	42	601.1956	SCREW	MS27039-1-21				
4006	4003	4004	4003	4002	4001	FINO #	PART #	DESCRIPTION	MATL	SPEC.

REV.	DESCRIPTION	DATE	APPROVED
A	INCORPORATED ECN 02191, 02351, 02719 & 02745	02/08/2010	P. BRAVO
B	INCORPORATED ECN 03046, 03079 & 04731	11/04/2014	P. BRAVO
C	INCORPORATED ECN 05096	09/09/2015	P. BRAVO

		2		2	41	601.2829	SCREW	MS224694554		
		2		2	40	601.2831	RIVET	MS20476ADS-7		
		1		1	39	646.3716	GAUGE BRACKET			
		6		6	38	601.1953	SCREW	MS22039-1-12		
	2	2		2	37	646.3715	STRUT DOUBLER			
		2	2	2	36	601.2824	BOLT	AN3-5A		
12	36			36	35	601.2277	RIVET	CCSC24615-9-02		
6	18			18	34	600.0795	NUTPLATE	MS21047-5		
3	3			3	33	601.2565	RIVET	MS20476ADS-7		
1	1			1	32	646.3813	STRUT BRACKET			
4	4			4	31	601.2822	BOLT	AN3-3A		
2	2			2	30	646.3812	GUSSET BRACKET			
8	8			8	29	601.2564	RIVET	MS20476ADS-6		
1	1	1		1	28	646.3714	GUSSET			
	1		1	1	27	646.3610	FILLER			
	3		3	3	26	601.2830	SCREW	MS24694555		
	2		2	2	25	601.2825	BOLT	AN3-6A		
	1		1	1	24	646.3811	RADIUS BLOCK			
	1		1	1	23	646.3712	CLIP			
	1		1	1	22	646.3711	CLIP			
8	8			8	21	601.2832	RIVET	MS20476ADS-5.5		
14	14			14	20	601.2020	RIVET	CR5213-5-3		
4	6	4	6	10	19	601.2823	BOLT	AN3-4A		
	1	1	1	1	18	601.2827	BOLT	AN3-13A		
	5	5	5	5	17	601.2912	SCREW	MS24694551		
1	1			1	16	646.3713	GUSSET			
1	1			1	15	646.3210	SUPPORT			
		1		1	14	646.3710	DOUBLER			
	1		1	1	13	646.3110	CHANNEL			
14	10	8	53	6	61	12	601.1624	LOCKNUT	MS21042L3	
16	32	18	120	16	144	11	601.1607	WASHER	MS114990039P	
				1	10		646.3410	LH WIPER DEFLECTOR		
					9		646.3411	RH WIPER DEFLECTOR		
		2		2	8		647.7703	STRUT ASSY		
		2		2	7		647.0112	STRUT BRACKET		
	1		1	1	6		646.3511	STRUT		
	1		1	1	5		646.3510	STRUT		
2		2		2	4		646.3810	BRACKET		
			1	1	3		646.2910	DEFLECTOR		
	1		1	1	2		646.3001	LOWER CUTTER ASSY		
		1		1	1		646.3301	UPPER CUTTER ASSY		
X							646.4006	LOWER CUTTER FIXED PROVISIONS		
	X						646.4005	LOWER CUTTER REMOVABLE PROVISIONS		
		X					646.4004	FIXED PROVISIONS KIT		
			X				646.4003	CABLE CUTTERS WITH WIPER FIXED PROVISIONS		
				X			646.4002	ASS350 WIPER DEFLECTOR KIT		
					X		646.4001	ASS350 CABLE CUTTERS KIT		
4006	4005	4004	4003	4002	4001	FINO #	PART #	DESCRIPTION	MATL	SPEC.

QTY	NEXT ASSY (S)	ORCA DATE 08/27/08	08/27/08
		DRAWN BY P. BRAVO	CHECKED BY P. BRAVO
		DRAWING APPROVAL P. BRAVO	08/27/08
		CONTRACT NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES 3 PLACE DECIMALS & 0.015 3 PLACE DECIMALS 1.000 ANGLES 1/2°		SEE B	SCALE NONE
SHEET CODE B		07M16	646.4000
SHEET CODE B		07M16	646.4000
SHEET CODE B		07M16	646.4000

DART 3030 ENTERPRISE CT., SUITE A, VISTA, CA. 92081 (760)-724-3300
APICAL INDUSTRIES, INC. DBA DART AEROSPACE

AS350 CABLE CUTTERS KIT

SHEET 1 OF 5